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ABSTRACT

Designed for use by employment skills training operators and educators, this report provides information on competency-based education (CBE) and its use in Illinois. First, some of the main features of CBE programs are outlined, i.e., their emphasis on the interests, needs, and strengths of students and on providing those skills that the student specifically needs. The next section defines CBE as a system whereby workers' tasks are identified and validated by an advisory committee; performance objectives are written and given to students prior to instruction; and criterion-referenced measures are developed related to objectives. This section also outlines the characteristics of a CBE program, explains a CBE curriculum development model, and identifies sources of information and assistance. Next, a listing is provided of all area secondary vocational education centers (ASVEC's) and community colleges in Illinois that offer CBE skills training, followed by in-depth case studies of the CBE programs at the DuPage Area Vocational Education Authority, the Vermilion Occupational-Technical Education Center, and the Stephenson Area Career Center. Finally, definitions of terms and a bibliography are provided. Appendices include samples of student competency sheets, learning guides, and evaluation forms; a goal (task) list; a sample certificate; survey materials; lists of ASVEC's and community colleges; and a description of a competency-based individualized vocational education project. (HB)

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Illinois
Competency Based Education Programs
and the
Employment and Training Community

Urban Oen, Ph.D.

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ILLINOIS

COMPETENCY BASED EDUCATION PROGRAMS

AND THE

EMPLOYMENT AND TRAINING COMMUNITY

To the Reader:

This study was written to provide employment skill training operators and educators with the information necessary to understand Competency Based Education (CBE) programs. The study can also be used to seek out possible programs for clients or to request help from training institutions to provide CBE skill training for clients. Also included in this report is a listing of the institutions in Illinois providing Competency Based Education skill training, their addresses, and a contact person for assistance in providing or setting up skill training programs.

Frank G. Adams, Project Director
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FOREWORD

Why Competency Based Education (CBE)?

Traditional approaches to instruction have generally centered around an entire class finishing the curriculum for a course or program on a fixed time - fixed delivery schedule; i.e., everyone completes at the same time using the same teaching/learning techniques. In contrast, the CBE system of instruction centers around an individual's interests, needs, strengths and learning style. It is possible in a personalized CBE program for an unemployed or underemployed person 17 years of age or older to enter a training program to only learn 10-15 skills and then immediately exit the program for employment or an advanced employment position. Too many times in education we have been guilty of forcing everyone to learn everything there is to know about an occupation rather than only providing that which is really needed. In addition, in most institutions, trainees must wait until the beginning of a new term or semester to begin learning skills, whereas in a CBE environment they usually can enter a program immediately.

Another unique feature of a CBE program is that students, because of their needs or limitations, can specialize in job title targets such as being a food service aide, baker's assistant, or fry cook, rather than attempting to complete the entire curriculum. Upon completion of the skills for each job title, the students are certified competent for that specific job title. It makes no difference how much each student learns, just so each is employable in a job or job category which meets their interests, abilites and needs.

How Can You Use This Manual?

Look in the Table Of Contents to find what interests you. If you want to understand CBE, read that section. If you want to know how to develop CBE materials or to locate CBE materials, read that section. If you are trying to locate possible CBE programs and find out what institution in Illinois is offering these programs, refer to that section of the manual. If you still cannot find what you want, feel free to call my office for free assistance, (312) 620-8770, ext. 239 or 249.[1]

Special thanks is due Dr. Robert E. Andreyka, Professor, University of South Florida, and Dr. Gerald Day of Maryland for the use of some of their CBVE materials. Thanks is also due all the area vocational center directors and the deans and directors of vocational education in Illinois community colleges for responding to the survey and for furnishing some of their CBVE materials.

Lastly, thanks is due the Illinois Department of Commerce and Community Affairs for sponsoring the study.

Thank you,

Urban Oen

[1] For a description of Dr. Oen's Demonstration Center CIVE Project refer to Appendix I.

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WHAT IS COMPETENCY BASED EDUCATION (CBE)?

Competency based education (CBE) is a systematic approach aimed at improving the teaching/learning process. CBE has also been called competency based instruction (CBI), performance based education or instruction, criterion referenced instruction (CRI), mastery learning, objective referenced learning and competency based vocational education (CBVE). By definition, CBE refers to a system whereby tasks of workers are identified and validated via a current advisory committee; performance objectives are written and given to students prior to instruction; criterion referenced measures are developed which relate to the objectives. The programs are open entry/open exit, and students master a given skill before progressing to the next skill.

A "competency" is defined as a knowledge, skill, or attitude which the student will demonstrate at a predetermined level. Competency statements begin with an action verb and contain a noun. Examples are: replace brake shoes, bake a cake, identify lawn weeds, type a business letter, make an occupied bed.

The basic intent of CBE is to aid student mastery of required competencies needed for successful on-the-job performance. Several aspects of CBE distinguish it from traditional instruction. These include.

1. Identification of subject matter content which is stated in performance terms.
2. Validation or verification of the competencies as being essential for successful employment in the occupation for which the student is being trained. (This is done by an advisory committee from industry).

3. Making the competencies available to the student, training agency, employers and everyone concerned in advance of instruction.
4. Describing what the student will be able to do, in performance terms, after completing the training program. (These are called performance objectives and contain three components: competency, conditions of learning, and standards of performance or training standards expected.
5. Making the program performance oriented. The emphasis is on student performance and not on paper and pencil tests.
6. Making the program fit student/employer needs.
   A. Programs work on an open entry/open exit concept. Students can enter a program at any time there is room in the program, learn that which they want to learn or need to learn and then exit the program.

      Examples:

      (1) Suppose an employer received a large order for aluminum welding. Suppose further that three of the welders of the firm had little experience with aluminum welding. The employer could review a welding task list, check off the tasks desired of the workers, and arrange to send them to a CBE school to learn only the checked off skills. The time for instruction and the fees would have to be worked out and then instruction would be provided. Each employee would attend until all the skills were mastered.

(2) Suppose a worker was unemployed or underemployed due to the lacking of certain skills. This person could go to a CBE school, identify the skills needed, enroll in the program to learn only those skills, exit the program upon successful completion of the skills, and then apply for a job or a better job.

In each of the above two examples, the workers would not be required to take prerequisite courses, wait until a new semester, etc. They would begin their training immediately.

B. Students are provided high quality student-centered learner activities along with appropriate learning materials and audiovisuals (slides, tapes and videotapes).

C. Learning is organized so that students can select what they want to learn and when they want to learn it, within reason.

D. Students can proceed to learn at their own rate within program guidelines. They can speed up, slow down, stop, or even repeat a competency.

E. Students can receive credit for what they already know. This is done either through pretesting or through a review of a task list completed at another training site.

F. Students can choose how they want to learn - individually, on a one-to-one basis, in small groups, in large groups, or through the use of audiovisuals.

G. Students accept more responsibility for their own learning.

H. Students are given more responsibility in decision making and time management. That is, they can help decide when they want to take a test or to perform a given skill.

I. Students can evaluate their own progress to see how well they are doing.

J. Students can move more freely in the classroom, shop, laboratory and/or the training center.

K. Students are provided enough time, within reason, to master a given competency or task before moving on to the next one.

L. Students must perform each task or demonstrate mastery of learning to a joblike level of proficiency before receiving credit for the competency, task or skill.

M. Students receive a personalized prescription for learning worked out by the instructor and based upon what the student already knows, his/her preference for learning, and other needs.

N. Students compete against preset job standards and not other students and are graded on achievement of the standards or criteria of each competency or skill.

For the teacher CBE means:

1. Being a manager of learning, a consultant rather than a "giver of all information," a facilitator of the learning process.
2. Being a motivator, concentrating on instilling confidence in the learner, providing rewards for jobs well done, and on serving as a model of desirable work habits, attitudes, and competency in the occupational field.
3. Being able to spend more time interacting with students on a one-to-one basis.
4. Being able to help those students who really need the help.
5. Having the responsibility of advising a group of students, and being a part in designing each student's personalized program of study.
6. Being responsible and accountable, along with the student, for the skills learned or not learned.
7. Being the key element in the teaching/learning process.
8. Being objective in evaluating students.
9. Being able to diagnose and solve learning problems.
10. Being able to assist learners to obtain individualized rewards.

Characteristics of a CBE Program*

A CBE program can be identified by examining its characteristics. The following paragraphs explain the major characteristics. It should be pointed out, however, that a program probably would not have all of these characteristics, but may have modifications of them.

1. Course content is based upon actual worker's tasks which are measurable. Competencies to be learned by the students are determined in advance of instruction through a job analysis. The job analysis focuses upon the job duties and tasks involved in work activity. The purpose of a job analysis is to find out what workers are doing on the job.

2. Student performance objectives are specified in advance of instruction. Job competencies are expressed in terms of student performance objectives. Performance objectives focus on student outcomes or what the individual will be able to do upon successful completion of instruction. A performance objective consists of three components: (1) A restatement of the job competency in observable and measurable terms; (2) a description of the conditions and limitations under which the student is expected to perform a task; and (3) a precise description of the acceptable performance

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*adapted from The Maryland Vocational Curriculum Production Project, Western Maryland Vocational Resource Center, P.O. Box 5448, McMullen Highway, Cresaptown, Maryland 21502, (301) 777-5886

standard or criterion. Students are made aware of the objectives they must achieve which eliminates guesswork for both students and teachers.

3. Student achievement is based upon demonstrated competency. Performance of skills is of prime importance in CBE. Emphasis is placed on th. development of minimal levels of competency by all or many of the students, thus promoting the acquisition of marketable job skills. However, opportunities should be provided and students encouraged to develop their abilities beyond the minimal performance standard so that individual abilities can be developed to their fullest.

4. Instruction is individualized. Opportunity is provided for differences among students with respect to the objectives they pursue at a given time, the mode or methods of instruction, and the materials used for learning. Instruction can be self paced, with the student having some choice in the selection of objectives and learning activities under the guidance of the teacher. Learning activities may involve the use of student learning guides, competency sheets, learning activity packages, group projects, independent study, on-the-job training, computer assisted instruction, and simulations.

5. The student and teacher are more accountable for performance of competencies. The student, as well as the teacher, can be more accountable for performance in a CBE program as compared with a traditional program. The individual knows what he or she is expected to demonstrate and must accept the responsibility, along with the teacher, for meeting the identified performance standards. In doing so, the student is encouraged to assume more responsibility for the instructional process since the completion of the program is dependent on the demonstration of specified competencies.

6. Learning is guided by feedback. Feedback plays an important part in a CBE program. Frequent or immediate feedback is provided to the student. The student's progress is monitored closely in relation to the stated objectives in order to provide reinforcement and motivation for learning, in addition to diagnosing any student deficiencies so that remedial instruction can be provided if necessary. Opportunity is provided for the students to correct their performances as they move ahead.

7. Learning time is flexible. Time may vary among students to accomplish the objectives. Thus, slower students are permitted to take enough time, and faster ones can proceed to advanced competencies.

8. An open entry/open exit program is possible. The concept of an open entry/open exit program is possible in CBE. When a student has achieved the required or desired competencies, the individual should receive credit for the work and move on to advanced training or the job market. Many entry and exit points throughout the training program may exist, reflecting different job title targets and skill levels within an occupation. The concept of open entry/open exit, however, is deemed by some as too difficult to handle administratively due to the present scheduling in many of today's schools.

9. Criterion referenced measurement is employed to evaluate the attainment of the performance objectives. A criterion referenced test (CRT) or measure is one that is constructed to yield measurements which are directly interpretable in terms of specified performance standards. A student is evaluated according to predetermined performance standards rather than by a comparison with other students. A CRT is performance oriented; that is, it measures if an individual can perform a job task or work sample under controlled conditions. This type of performance test usually, but not always, involves the manipulation of equipment, materials and objects. Since every student progresses as an individual, failure or pressure is minimized.

10. The teacher is a manager and facilitator of instruction. The teacher's and student's roles in a CBE program are different than in a traditional program. The teacher is more of a manager, facilitator and motivator in the instructional process. The teacher and student actually become more involved with the teaching/learning process.
11. A certificate containing the competencies achieved or mastered is provided the student upon exiting a program. This certificate of skills is a handy resume.
12. Job seeking and job keeping skills are provided to the student along with related skills necessary for job success. Examples are: write a resume, fill out an employment application, etc.
13. Emphasis is on performance and skill development.
14. Student learning is "real world" oriented.

CBE Curriculum Development Model

Figure 1 is a curriculum development model intended to help instructors, trainees and administrators identify and develop CBE learning delivery materials. The following is an explanation of each step of the model along with possible sources of where information can be obtained for assistance.

1. Conduct a feasibility study or evaluate existing courses or programs. The first step in the development of a CBE program is an essential step to insure that the program is really needed before time and effort are needlessly spent.
   A. Determine the need for program graduates by reviewing employment projections.
   B. Project costs for running the program over the next five years (instructional, equipment, materials, building).
   C. Verify feasibility data with advisory committee.
   D. Submit results to administration and board for approval to develop curriculum.
2. Conduct a job analysis for each occupation to identify program content. Figure 2 is a graphic listing of the procedures for the completion of a job analysis and for the development of a task listing transcript.

FIGURE 1
CBE CURRICULUM DEVELOPMENT MODEL

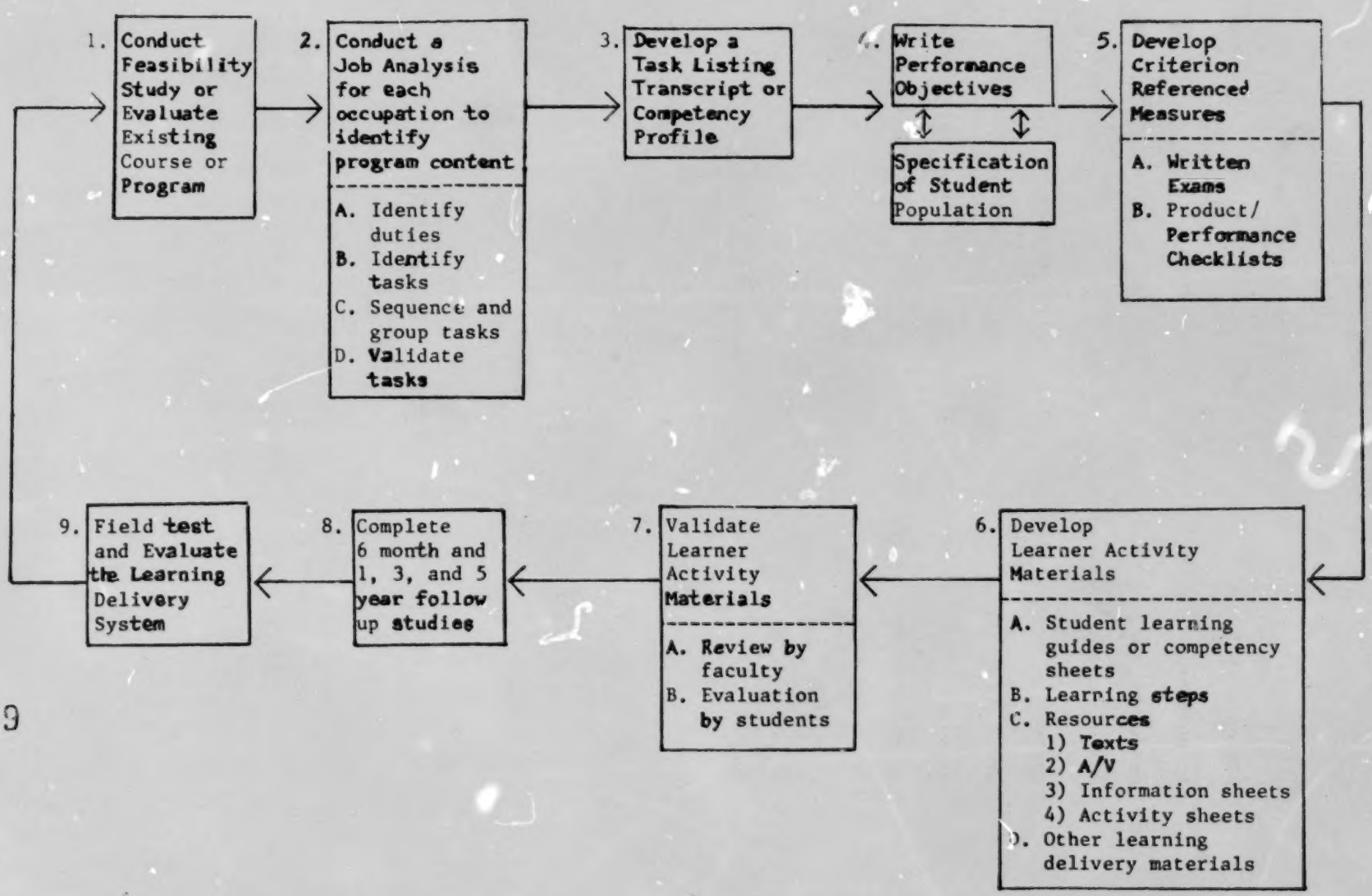
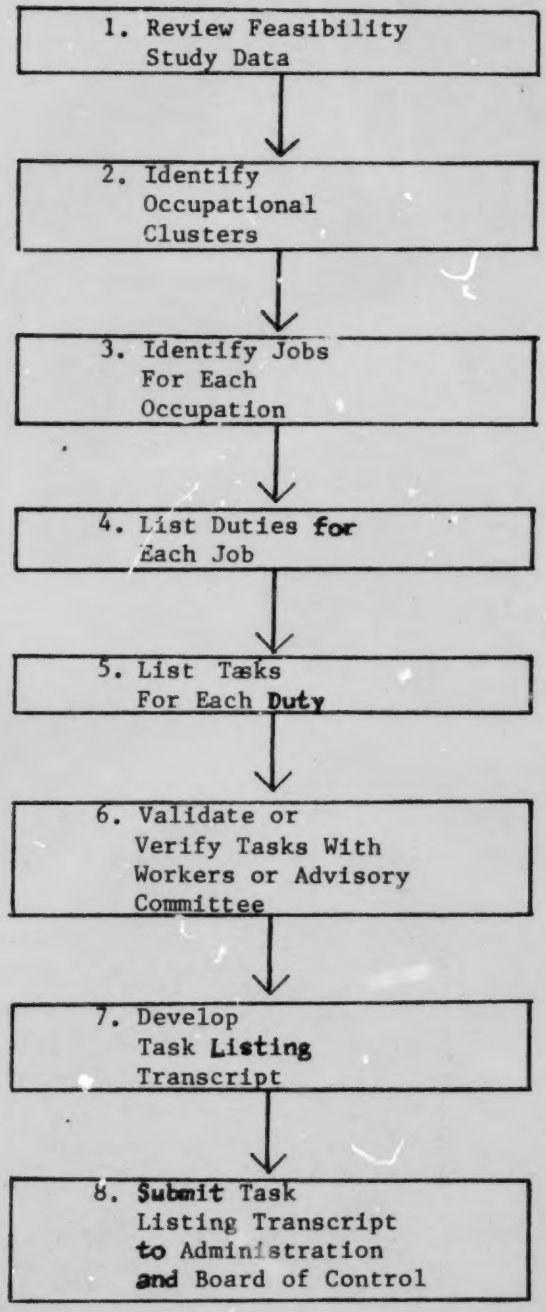

1. Conduct Feasibility Study or Evaluate Existing Course or Program
2. Conduct a Job Analysis for each occupation to identify program content
A. Identify duties
B. Identify tasks
C. Sequence and group tasks
D. Validate tasks
3. Develop a Task Listing Transcript or Competency Profile
4. Write Performance Objectives
Specification of Student Population
5. Develop Criterion Referenced Measures
A. Written Exams
B. Product/ Performance Checklists
6. Develop Learner Activity Materials
A. Student learning guides or competency sheets
B. Learning steps
C. Resources
1) Texts
2) A/V
3) Information sheets
4) Activity sheets
D. Other learning delivery materials
7. Validate Learner Activity Materials
A. Review by faculty
B. Evaluation by students
8. Complete 6 month and 1, 3, and 5 year follow up studies
9. Field test and Evaluate the Learning Delivery System

FIGURE 2

MODEL FOR THE DEVELOPMENT OF TASK LISTING TRANSCRIPTS


1. Review Feasibility Study Data
2. Identify Occupational Clusters
3. Identify Jobs For Each Occupation
4. List Duties for Each Job
5. List Tasks For Each Duty
6. Validate or Verify Tasks With Workers or Advisory Committee
7. Develop Task Listing Transcript
8. Submit Task Listing Transcript to Administration and Board of Control

A. Before a job analysis is begun, the curriculum planner should gain a familiarity with the occupation. This can be done by:

(1) reviewing the Dictionary of Occupational Titles.

(2) interviewing persons presently employed or supervising others employed in the job area under consideration.

(3) visiting other trainers offering the area under consideration.

B. Identify the occupational clusters from the data gathered in item A.

C. Identify the jobs for each occupation from the research done in item A.

D. Identify the tasks and duties for each job. There are many sources to which the curriculum planner can turn for help in identifying tasks and duties. These are:

(1) Vocational-Technical Education Consortium of States Catalogs (V-TECS), available from Western Illinois University for purchase or the Illinois Vocational Curriculum Center for loan.*

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*V-TECS, Curriculum Publications Clearinghouse, Western Illinois University, Horrabin Hall 47, Macomb, IL 61455.

East Central Network for Curriculum Coordination/Illinois Vocational Curriculum Center, Sangamon State University, Springfield, IL 62708, (217) 786-6600, Toll Free: (800) 252-8533.

(2) Abstracts of Instructional and Research Materials in Vocational and Technical Education (AIM/ARM). Columbus, Ohio: The Center for Research in Vocational Education, The Ohio State University.

(3) Directory of Task Inventories. Columbus, Ohio: The Center for Research in Vocational Education, The Ohio State University.

(4) Educational Resource Information Center (ERIC) reports.

(5) National Curriculum Management Network (Regional Centers).

(6) Armed Forces' instructional materials.

(7) DACUM (Developing A CurriculUM): Prince Edward Island. Canada: Holland College. (Most of these are dated.)

(8) Competency based schools in Illinois. A resource for all schools or agencies is the CIVE project, 301 North Swift Road, Addison, IL 60101, (312) 620-8770, ext. 239 or 249.

E. After the tasks or duties are identified, they should be entered on a form for validation. The following should be helpful to you in writing job and duty statements and in entering them on a form for validation or verification.

Job Duties

Job duties are distinct major activities involved in performing a job and consist of a collection of related tasks.

Characteristics of Job Duties

1. A duty is one of the worker's principal responsibilities.
2. It occupies a reasonable portion of the worker's time.
3. It occurs regularly in the worker's work cycle.
4. It describes tasks which involve closely related knowledges and skills.

Example Job Duties

- Performing supervisory functions
- Caring for eye injuries
- Performing mail handling activities
- Performing bench work
- Maintaining greens and tees

Job Task

Job tasks are complete and distinct units of work performed by an individual on the job. Each task has a definite beginning and ending within a limited period of work time. Performance of job tasks usually result in a product or some observable change in the student or the work environment.

Characteristics of Task Statements

1. Each begins with an action verb which describes a performance which will be done by the student for mastery. (Avoid the gerund or "ing" form of verb)

   Example:. Calculate your net salary

   . Replace brake shoes

   . Adjust transcriber controls

2. The performance which the task describes must be readily observable or measurable.

   Example:. Calculate your net salary

   . Replace brake shoes

   . Adjust transcriber controls

Example Tasks

. Adjust transcriber controls

. Calculate net salary

. Mix permanent hair colors

. Type business envelopes

. Replace brake shoes

. Disinfect catheters

. Prepare a pot roast

. Mulch seed beds

. Align flight radar timing units

. Develop advertisements

. Inventory stock

3. Each is designed to communicate to the student what must be done to master the task.

4. Identify tasks by number such as task 101, 210, 350, etc. Each duty area should be a different series of numbers by 50's or 100's depending on the number of duties.
5. Two or more tasks must appear under each duty.
6. Each statement should be short and concise.
7. Avoid abbreviations in writing task statements.
8. Each task should be typical of an assignment given to a worker in the occupation.
9. Each task should be an entry level activity of the occupation for which training is being provided.
10. Try to avoid cognitive only tasks as much as possible as these would become the first enabling objective in a learning guide.
11. Combine tasks which take very little time to learn with other related tasks so that there are very few 1 - 2 hour tasks. A task should take somewhere between 5 - 20 hours for completion with 10 hours being the average recommended length of time for completion.

Figure 3 contains a sample form which can be used to validate competencies or tasks. The job is identified at the top of the page. Notice that the tasks for each duty are listed on a separate page.

FIGURE 3

JOB ANALYSIS INVENTORY

JOB Machine Shop *

Directions:
1. Please check the tasks you now perform.
2. Add any tasks which you now do but which are missing on the form.
3. Indicate the frequency of performance for each of the tasks you checked. CODE: ED = Every Day; F = Frequently (several times/week; R = Rarely.
4. Rate the importance of each task for obtaining an entry level job. CODE: E = Essential; D = Desirable or nice to know; U = Unnecessary; NS = Not Sure.

DUTY: Performing Metalwork Operations	Check if done in present job (1)	Frequency of Performance (3)			Importance (4)			
TASKS		FD	F	R	E	D	U	NS
1. Clamp work in holding device								
2. Cut metal stock								
3. Fabricate special metalworking tools								
4. Heat treat metal								
5. Operate cylindrical grinder								
6. Operate hone								
7. Perform bench filing								
8. Polish metal								
9. Use depth gages								
10. Measure with dial test indicator								
11. Check layout with gage blocks								
12. Determine accuracy of precision measurement instruments w/gage blocks								
13. Measure with height gages								
14. Measure with sine bar								
15.								
16.								
17.								
18.								
19.								
20.								

* From V-TECS Catalog

F. Validate or verify tasks with workers or advisory committee. The form contained in Figure 3 can be used with workers or with an advisory committee. If workers are used, they should complete all columns, i.e., 1, 3, and 4. If an advisory committee is used, they should only complete column 4, "Importance." After the workers or advisory committee members complete the job analysis inventory, tabulate their responses and analyze the data. In doing this, it is recommended that you assign values to the importance table and multiply the number of responses by each value and divide the sum by the number of responses to determine the mean response. Then by using the following table, you can determine the mean importance for each task.

Importance	Computational Value Assigned	Interval Limits
Essential	3	2.50-3.00
Desirable	2	1.50-2.49
Unnecessary	1	1.00-1.49
Not Sure	0	-

For those responses in the not sure column, it is okay to tabulate them, but do not divide by the NS numbers to determine the average response.

3. Develop a task listing transcript or competency profile.

A. A task listing transcript is a comprehensive list of duties and tasks which spell out clearly and precisely the program tasks. The list varies in size depending on the occupation. The task listing transcript serves as the basis for developing the training program. The listing is also used by employers to determine what competencies graduates of the program will possess. Students will also find the task listing transcript helpful in determining exactly what they will be able to do upon completing a program. A sample task listing transcript is shown in Figure 4.

B. Listing of Tasks by Job Title. An optional activity but highly recommended is the listing of tasks by job title. One unique feature of personalized CBE is the ability to uniquely tailor a program to a student's ability and needs. By listing the tasks by job title as shown in Figure 5, the trainer can insure that students will complete the required skills in order to be certified by job title. The trend is not to require all students to attempt to master all possible skills in a program but to complete only those of interest in a job title and those in which they are capable of completing. The procedures to follow in completing this step are to list the tasks on the form shown in Figure 5 by duty title and then submit it to the program advisory coummittee for determination of which tasks are needed by DOT title.

FIGURE 4

PROGRESS HIGH SCHOOL

OCTOBER 1, 1981

TASK LISTING TRANSCRIPT

Student Name _____ Entrance Date _____

Program Name Food Service Exit Date _____

Department Number _____ Program Number _____

TOTAL TASKS FOR PROGRAM: 140

Task	Standard Hours	Contracted Hours	Mastery Hours	Instructor Initials	Task Description
			Identifying Operational/Safety Procedures		
001	4	----	----	----	Outline procedures and rules of Progress High School.
002	3	----	----	----	Identify and demonstrate general safety procedures.
003	2	----	----	----	Participate in VICA.
			Cleaning and Maintaining Food Service Area and Equipment		
101	4	----	----	----	Identify food preparation techniques which prevent contamination.
103	3	----	----	----	Identify food holding and storage techniques which prevent contamination.
105	3	----	----	----	Identify food serving techniques which prevent contamination.
107	2	----	----	----	Identify standards of personal hygiene.
109	5	----	----	----	Clean and sanitize small hand tools.
111	9	----	----	----	Clean and sanitize equipment.

Page 1 of 8 pages.

FIGURE 5
LISTING OF TASKS BY JOB TITLE

PROGRAM NAME: SECRETARIAL (BUSINESS EDUCATION)

DUTY: A -- Maintaining Office Supplies

TASK NO.	TASK DESCRIPTION	D.O.T. CLASSIFICATIONS (BY JOB TITLE)										
		1	2	3	4	5	6	7	8	9	10	11
		STENOGRAPHER	TYPIST	SECRETARY	ADMINISTRATIVE SECRETARY	ADMINISTRATIVE ASSISTANT						
105	Order supplies as needed from suppliers	X	X	X	X	X						
110	Prepare requisitions for supplies	X	X	X	X	X						
115	Distribute and control office supplies			X	X	X						
120 c	Determine requirements for supplies			X	X	X						
125	Check inventory to determine if minimum quantities of supplies are on hand	X	X	X	X	X						

C. Submit task listing transcript to administration. After the advisory committee validates the final task listing transcript and determines which tasks are needed by DOT title, a short report should be prepared and submitted to the administrative body for acceptance and approval.

4. Write performance objectives based upon the competencies identified in Step 2.

A. Student performance objectives are statements that describe the task activity, the conditions under which the task is to be performed along with tools and equipment, and the standards or criteria (levels, speed, or quality of outcome being sought) that when achieved will identify acceptable attainment of the outcome. A sample performance objective is: "Provided with a recipe and baking supplies and equipment, bake a layer cake. To master this task you must pass a written criterion exam by scoring 8 out of 10, or 80 percent, and 9 out of 10, or 90 percent, on a product checklist."

B. A good resource on writing measurable performance objectives is available from the CIVE project, 301 North Swift, Addison, IL 60101.

C. Specification of student population -- Student perfomance objectives should be prepared in regard to the specific student population to be served. The physical characteristics, education, ability and training, motivation, interest, attitudes, biases and prejudices of the students are important aspects to be

considered in setting appropriate and attainable objectives. Also, this information is essential in designing instructional learning delivery strategies.

5. Develop criterion referenced measures. Criterion referenced measures are used to evaluate the student's mastery of the tasks. The procedures for developing criterion referenced measures are:

   A. Determine whether a written test or a product/performance test or both would be the most appropriate. This determination is made by reviewing the performance objective criterion.

   B. If a written test is needed, at least ten multiple choice questions covering the entire task is recommended.

   C. If a checklist is needed, the items to be observed or measured should be listed in a logical order. It is recommended that questions or statements beginning with a hard verb be used. (See Figure 6 for sample performance checklist.)

      1) If a performance checklist, list procedural steps.

      2) If a product checklist, list the characteristics of the completed product.

      3) Determine and specify the criteria for the items (yes - no; acceptable - unacceptable) (avoid correct - incorrect; proper - improper).

      4) Determine which items are critical.

Figure 6 - Performance Checklist

TASK 006

CRITICAL ITEMS	ITEMS TO BE OBSERVED OR CHECKED	RATING	
		YES	NO
	1. Checks reservoir for water level.		
	2. Fills chamber unit until water covers plate.		
	3. Turns knob to sterilize to stop flow.		
	4. Loads chamber and closes door.		
	5. Turns middle knob to point where indicator is straight up (yellow light on).		
	6. Watches temperature guage until desired temperature is reached (green area).		
	7. Turns middle knob counter clockwise slowly until yellow light goes off.		
	8. Sets upper knob to 15 minutes.		
	9. Turns lower knob to vent when bell rings.		
	10. Opens door slightly for 5 minutes when pressure guage reads zero.		
	11. Waits 5 minutes and then removes articles.		
	12. Turns sterilizer to off.		

TOTAL POINTS 12
POINTS EARNED ____
POINTS NEEDED FOR MASTERY 12

5) Assign point values to each item (used to differentiate items if any differences exists).

6) Write directions to the students and evaluator.

7) Entitle your checklist and provide identification information

8) Evaluate your checklist

9) Revise your checklist.

6. Develop learner activity materials.

A. One of the most important steps in developing a CBE program is the development or identification of effective learner activity materials to aid students in mastering a task. Since we know no two students learn in exactly the same way, alternatives for meeting each performance objective should be available such as printed matter, slide-tape or video presentations, teacher aides, tutors, and possibly computer assisted instruction.

B. You should also identify lab or shop experiences, field trips and other experiences which provide reinforcement and "actuality" or "reality."

C. Information sheets, activity sheets (self tests), job sheets, etc. should also be prepared.

D. The materials which you identified or developed in items A through C will need to be packaged for learning delivery. Two common forms of packaging are the competency sheet and student learning guides. (For sample, see Appendices A and B.)

7. Validate the learner activity materials. Most CBE teachers use two ways to validate their materials.

   A. A CBE committee person and master teacher review the materials.

   B. Students evaluate the materials upon completion of a task. (For a sample student evaluation form, see Appendix C.)

8. Complete follow-up studies. Follow-up studies should be completed at six months and at one, three, and five year intervals to properly ascertain the effectiveness of the instructional program. Surveys should be prepared and sent to both program graduates and employers to ascertain effectiveness.

9. Field Test and evaluate the learning delivery system. It is recommended that students, faculty, and the advisory committee evaluate the learning delivery system each year to ascertain its effectiveness. Any weaknesses which are identified should be corrected.

ILLINOIS EDUCATIONAL INSTITUTIONS OFFERING COMPETENCY BASED PROGRAMS

Illinois Educational Institutions Offering the CBE Programs

The following contains a listing of all area vocational centers and community colleges in Illinois offering CBE skill training programs. Each of these institutions have identified a contact person who can work with employment skills training operators in setting up skill training programs. Most educational institutions in Illinois can arrange to either set up a special class, course or program, or to enroll trainees in a regularly existing program. Those institutions with CBE skill training programs can more easily meet the needs of your clients by allowing trainees to enter a program to learn specific skills and then exit the program. At some CBE schools, the following is possible:

1. The employment skills training operator (CETA, business, industrial, government agency) contacts the local educational institution.
2. The needs are discussed.
3. The employment skills training operator reviews the tasks (skill or competency) lists and identifies the tasks or skills needed for his or her clients. (See Appendix D.)
4. The educational institution arranges for the trainees to attend the school. If the institution has room for the trainees, they may begin their training immediately. (At some institutions, trainees must wait until a new quarter or semester begins. Some educational institutions are not able to blend or place the trainees into their on-going programs, but can arrange special programs to meet employment skill training operator needs.

5. The trainee enters an on-going CBE program, learns the skills and then exits the program whenever he or she is competent. The length of time for the training varies with the skills selected, the trainees, and the length of time the trainee spends at the institution.
6. Each trainee is normally provided with a skill certificate which lists the competencies completed. (See sample, Appendix E).
7. The employment skills training operator either pays a flat fee for the training or pays for a given number of training hours.

Community Colleges in Illinois Offering CBE Programs and the Programs Offered

The community colleges offering CBE programs and the programs they offer are contained in Table 1. An analysis of Table 1 reveals that 13 colleges are offering 32 programs via a CBE format. The programs offered vary from skill training programs such as health, agriculture, transportation to ABE/GED type programs.

Type of Training Available

Eleven of the 13 community colleges specialize in upgrading or retraining employees, while the other two do not. One of these two does offer specialized programs when requested to do so by a company, (See Table 2). Twelve of the 13 colleges provide training for unemployed workers. One of the 12 is only through a CETA program.

How to Obtain CBE Skill Training at a Community College

There are 39 public community college districts in Illinois which offer the program operator a diverse range of alternatives for skill training. The specific skill training offered varies with the geographic location and needs of the local clientele. As indicated above, only 13 community colleges presently offer individualized CBE programs in which you can place clients for specific skill training or upgrading. For programs which are not CBE at these 13 colleges and for the other colleges, you will need to contact the school to set up specific CBE programs to meet your needs.

The following "how to" suggestions are offered to the program operator who wishes to create CBE skill training programs.

1. Determine if your agency requires training which can ultimately result in a degree or certificate or whether you want short-term specific skill training verified by a skill completion certificate or continuing education units. If you want short-term "brush-up" training, job upgrading, or even initial skill development, developing a list of skill training desired can help the community college in putting together a training program.
2. Look at the list in Appendix H to locate the nearest public community college.
3. Contact either the dean or director of vocational-technical, career or occupational programs or the dean or director of community service programs. (Table 1 contains a current list of the current CBE colleges and the programs offered. Tables 3 & 4 contain the type of training offered and who to contact at the CBE schools).
4. Indicate your training needs to the contact person.
5. Ask the contact person to send you a catalog of current programs and task lists for each program of initial interest. (At some community colleges, it is possible to look at their CBE task lists, identify the skills desired, and to place your clients in an already on-going program to learn a given number of skills).

6. If a program is offered in a traditional manner or is not offered, ask the contact person if a CBE program can be set up to meet your needs.
7. Visit the community college to review the curricula of interest and to observe the potential training program while it is in session.
8. Talk with the instructors for the programs in which you are interested to determine their willingness to train your clients.
9. Determine if the training can best be done at your location or if it requires special community college facilities.
10. Determine if skill training is being offered in an off-campus location near you. (Many colleges have multiple sites in which they offer training.)
11. Review your clients' prior learning experiences and determine if they can either obtain credit for their life experiences (through C.L.E.P. or N.P.E.P.) or through local CBE college proficiency examinations.
12. Provide specific feedback to the appropriate college administrator on the quality of the training once it has been completed.

NOTE: If the nearest community college cannot provide the type of training you desire, then contact either a nearby community college or the nearest area vocational center. (See Appendices G and H.)

TABLE 1

COMMUNITY COLLEGES IN ILLINOIS OFFERING

CBE PROGRAMS

Community College	CBE Program Offered																																		
	Air Cond./Ref.	Accounting	Adult Basic Ed. (ABE)	Agr. Mech.	Apprenticeship	Auto Tech.	Auto Body	Aviation Maint.	Biology	Burglar Alarm inst.	Business Corresp.	Cabinet Making	Chemistry	Clerk Typist	Construction Energy	Dental Assisting	E.S.L.	Ind. Engr. Tech.	Math	Machine Trades	Nursing	Nursing Ass't.	Office Skills	Pre-GED	Respiratory Therapy	Secretarial	Shorthand	Typing	Typesetting	Typewriter Repair	Welding	Word Processing			
Black Hawk College				X		X																									X				
College of Lake County			X													X							X											
Joliet Junior College									X												X					X								
Lincoln Trail																																			
Moraine Valley C.C.																		X																	
Olney Central College						X	X					X			X																X				
Rock Valley College					X			X								X				X	X	X	X		X						X				
Sauk Valley College																							X												
Spoon River College																										X									
Southeastern IL College																							X								X				
Thornton		X							X				X									X	X						X	X	X	X			
Waubonsee Comm. College																							X			X									
William Rainey Harper	X											X							X																

TABLE 2

TYPE OF CBE TRAINING AVAILABLE AT COMMUNITY COLLEGES

Community College	Type of Training	
	Upgrading or Retraining	Unemployed Training
Black Hawk College	Yes	Yes
College of Lake County	No	Yes*
Joliet Junior College	Some	Yes
Lincoln Trail	Yes	Yes
Moraine Valley C.C.	Yes	Yes
Olney Central College	Yes	Yes
Rock Valley College	Yes	Yes
Sauk Valley College	Yes	No
Spoon River College	Yes	Yes
Southeastern IL College	Some	Yes
Thornton	No**	Yes
Waubonsee Comm. College	Yes	Yes
William Rainey Harper	Yes	Yes

* Through CETA

** If a company requests it, then we offer it.

TABLE 3

PEOPLE TO CONTACT AT A COMMUNITY COLLEGE TO

ARRANGE A CBE PROGRAM

BLACK HAWK COLLEGE, EAST
Mr. Larry G. Munton, Director
Industrial Technology Program
485 Midland Drive
Kewanee, IL 61443
(309) 852-5671

COLLEGE OF LAKE COUNTY
Ms. Jackie Dungan, Director
Manpower Training & Adult Ed.
19351 West Washington
Grayslake, IL 60030
(312) 223-6601, ext. 279

JOLIET JUNIOR COLLEGE
Mr. John Corradetti, Dept. Chrm.
Business Occupations
1216 Houbolt Ave.
Joliet, IL 61436
(815) 729-9200, ext. 228

LINCOLN TRAIL COLLEGE
Mr. Richard Sanders, President
RR #1
Robinson, IL 62454
(618) 544-8657

MORAINE VALLEY COMMUNITY COLLEGE
Mr. George Skuturva, Instructor
10900 S. 88th Ave.
Palos Hills, IL 61465
(312) 974-4300, ext. 413

OLNEY CENTRAL COLLEGE
Dennis Fruch
Director of Placement
Olney, IL 62450
(618) 395-4351

ROCK VALLEY COLLEGE
Dolores Ford, Director
Occupational Education Relations
3301 North Mulford Rd.
Rockford, IL 61101
(815) 654-4338

SAUK VALLEY COLLEGE
Mr. Eugene Wagner, Asst. Dean
Business and Technology
RR #5
Dixon, IL 61021
(815) 288-5511, ext. 356

SPOON RIVER COLLEGE
Zollie Hall, Director Occupational Ed.
RR #1
Canton, IL 61520
(309) 647-4645, ext. 250 or 251

SOUTHEASTERN ILLINOIS COLLEGE
Dr. Robert Gregg, Dean, Occup. Ed.
333 N. College St.
Harrisburg, IL 62946
(618) 252-6376, ext. 45

THORNTON COMMUNITY COLLEGE
Pat O'Connell, Director, Skills Center
15800 S. State
S. Holland, IL 60473
(312) 596-2000, ext. 228

WAUBONSEE COMMUNITY COLLEGE
Mr. Leland Thompson, Dean
Mr. Norm Paul, Asst. Dean
Route 47 at Harter Rd., P.O. Box 508
Sugar Grove, IL 60554
(312) 466-4811, ext. 351

HARPER COLLEGE
G. Dower, Asst. Dean
Algonquin and Roselle Rd.
Palatine, IL 60067
(312) 359-4200

Area Vocational Centers in Illinois Offering CBE Programs and the Programs Offered

The area vocational centers offering CBE programs and the programs offered are contained in Table 4. An analysis of Table 4 reveals that only 18 centers offer CBE programs.* All programs at six institutions are competency based. These are: Beck Area Vocational Center, Redbud; DuPage Area Vocational Education Authority (DAVEA) Center, Addison; Lake County Area Vocational Center, Grayslake; Stephenson Area Career Center, Freeport; Vermilion Occupational Technical Education Center, Danville; and Whiteside Area Vocational Center, Sterling.

Type of Training Available

Eight of the schools can accommodate the upgrading or retraining of workers while 14 of the schools can provide training for unemployed workers (see Table 5). Six of the 14 schools provide unemployment training through CETA.

How to Obtain CBE Skill Training at an Area Vocational Center

There are at present 32 public area vocational centers in Illinois offering skill training programs. The type of programs offered by each varies with the needs of the locale in which the center is located. As indicated above, only 18 have individualized CBE programs, however, the others may be able to set up a CBE program to meet your specific needs.

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*Many area vocational centers are beginning to develop competency based programs. Most are in the skill verification stage or are developing CBE materials. Many stated on the survey that they are not individualized.

If you are interested in obtaining skill training for your clients or employees at an area vocational center, please do the following:

1. Determine if your agency requires training which can ultimately result in a degree or certificate or whether you want short-term specific skill training verified by a skill completion certificate. If you want short-term "brush-up" training, retraining, job upgrading or even initial skill development, by developing a list of skill training desired can help the area vocational center in putting together a training program.
2. Look at the list in Appendix G to locate the nearest area vocational center.
3. Contact the area vocational center director or guidance counselors for a list of courses or programs offered by the area vocational center. (Tables 4 & 5 contain a current list of the 18 CBE schools and the CBE programs offered. In addition, Table 6 contains a person to contact at the CBE schools). Ask the contact person for specific program task lists which you can review to determine what training or retraining possibilities are already available.
4. Indicate your training needs to the contact person.
5. Ask the contact person to explain which programs are available and the procedures to follow in enrolling employees or clients in the programs. (At some area vocational centers, it is possible to enroll clients in an already existing program to learn the skills desired).

6. If a program is not available, ask the contact person if a CBE program can be set up to meet your needs.
7. Visit the area vocational center to review the curriculum (program task or skill lists) and to observe the potential training program while it is in session.
8. Talk with the instructors for the programs in which you are interested to determine their willingness to train your clients.
9. Determine if the training can best be done at your location or if it requires special area vocational center facilities.
10. After the training is over, provide specific feedback to the area vocational center director concerning the quality of training received.

NOTE: If the nearest area vocational center director cannot provide the type of training you desire, then contact either a nearby area vocational center or the nearest community college. (See Appendices G and H and Tables 4-6.)

TABLE 4

AREA VOCATIONAL CENTERS IN ILLINOIS OFFERING CBE PROGRAMS

Vocational Area

CBE Programs Offered

Area Vocational Center	Applied Sciences							Business								Personal			Media		Industrial							Transportation						
	Nurse/Medical Assistant	Physical/Occupational Therapy	Dental Assistant	Medical Lab Assisting	Allied Health Assistant	Ornamental Horticulture	Agriculture Mechanics	Professional Secretary	Information Processing Careers	Paraprofessional Accnt./Audit.	Computerized Data Processing	Data Entry	Marketing Related Occupations	Records Management Careers	Finance and Credit Services	Travel & Tour Services	Child Care	Cosmetology	Food Service	Media Technology	Television Production	Machine Tool Operation	Welding & Fitting	Graphic Arts/Production	Applied Environmental Design	Industrial Electronics	Construction Trades	Heating & Air Conditioning Serv.	Industrial Equipment Repair	Electrical Maintenance	Aviation Maintenance Technology	Auto Mechanics	Auto Body Mechanics	Heavy Truck Mechanics	Materials Handling/Vehicle Oper.	Small Engine & RV Mechanics
Ambraw Valley Area Secondary Voc. Center	X											X											X								X				
Beck Area Vocational Center	X					X		X		X	X	X					X		X				X	X							X	X	X		
Bloomington Area Vocational Center												X							X				X	X								X				
Capital Area Vocational Center			X					X				X												X			X					X				
DAVEA	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
Decatur Area Vocational Center								X				X		X																						
J. B. Johnson Career Development Center								X																												
Jo Daviess-Carroll Area Vocational Center								X	X	X	X	X	X	X	X							X	X	X								X	X			
Iroquois Area Vocational Center																																				
Lake County Area Vocational Center	X			X		X		X	X		X	X					X	X	X	X	X	X	X	X		X	X	X				X	X		X	
Mid-Valley Area Vocational Center																	X																			
Rockford Area Vocational Center	X																																			
Sauk Area Career Center																																				
Stephenson Area Career Center	X						X	X									X	X				X	X		X	X	X			X		X	X			
United Township Area Vocational Center																																				
Vermilion Occupational Tech. Ed. Center	X					X		X									X		X			X	X		X	X	X					X	X			
Whiteside Area Vocational Center	X					X		X									X	X	X			X	X	X	X	X	X					X	X			
Wilco Area Career Center	X					X			X		X	X					X	X	X				X	X		X	X					X	X			

TABLE 5

TYPE OF CBE TRAINING AVAILABLE AT AREA VOCATIONAL CENTERS

School (AVC)	Type of Training	
	Upgrading or Retraining	Unemployed Training
Ambraw Valley	NO	YES
Beck	YES	YES
Bloomington	NO	YES*
Capital	YES	YES*
Decatur	NO	YES*
DuPage (DAVEA)	YES	YES
Iriquois	YES	YES
J. B. Johnson	NO	NO
Jo Daviess-Carroll	NO	YES
Lake County	YES	YES*
Mid-Valley	NO**	YES*
Rockford	NO	NO
Sauk	YES	YES
Stephenson (SACC)	YES	YES
United Township	NO	NO
Vermilion (VOTEC)	NO	YES*
Whiteside	YES	YES
Will County (WILCO)	NO	NO

* Unemployed training is done through CETA and/or other agencies.

** Would do so if requested.

TABLE 6

PEOPLE TO CONTACT AT AN AREA VOCATIONAL CENTER TO

ARRANGE A CBE PROGRAM

AMBRAW VALLEY AVC
Mr. Robert Craft, Director
714 10th
Lawrenceville, IL 62439
(618) 943-3612

BECK AVC
Tom Salee, Guidance Coord.
RR #3 Box 91
Redbud, IL 62278
(618) 473-2222

BLOOMINGTON AVC
Mr. Dan Swanson, Manager
1202 East Locust
Bloomington, IL 61701
(309) 827-6124

CAPITAL AVC
Mr. Robert Leming, Ass't Dir.
2201 Toronto Rd., P.O. Box 3427
Springfield, IL 62708
(217) 529-5431

DAVEA
Dr. John G. Gibson, Dir. or DET Coord.
301 N. Swift Rd.
Addison, IL 60101
(312) 620-8770

DECATUR AVC
Bill Rosser, Coordinator
300 East Eldorado St.
Decatur, IL 62523
(217) 424-3073

IRIQUOIS AVC
Mr. Ralph Buswell, Director
Court House Rd.
Watseka, IL 60970
(815) 432-5471

J.B. JOHNSON CAREER DEVELOPMENT CNTR.
Mr. Michael Beaber, Director
4200 Humbert Rd.
Alton, IL 62002
(618) 463-2153

JO DAVIESS-CARROLL AVC
Sharron Warner, Bill James, Instrs.
Highway 20 West P.O. Box K
Elizabeth, IL 61028
(815) 858-2203

LAKE COUNTY AVC
Mike Anderson, Vocational Coord.
19525 W. Washington St.
Grayslake, IL 60030
(312) 223-6681

MID VALLEY AVC
Jack Irwin, Guidance Coord.
RR #1
Maple Park, IL 60151
(312) 365-6468

ROCKFORD AVC
Everett Worrell, Director
5125 35th St.
Rockford, IL 61109
(815) 874-6321

SAUK ACC
Dr. Ronald L. Foreman, Director or
Mr. Coulter, Assistant Director
138th and Crawford Ave.
Robbins, IL 60472
(312) 371-1880

STEPHENSON ACC
Mr. T.J. Gilley, Student Serv. Coord.
Pearl City Rd.
Freeport, IL 61032
(815) 235-8025

UNITED TOWNSHIP AVC
Tom Lonergan, Coordinator
Archer Dr. at 42nd Ave.
East Moline, IL 61244
(309) 752-1695

VOTEC
Mr. Robert Weist, Student Serv. Coord.
Catlin Rd.
Danville, IL 61839
(217) 443-0770

WHITESIDE AVC
Mr. Robert S. Gomsrud, Director
1608 Fourth Avenue
Sterling, IL 61081
(815) 626-5810

WILCO ACC
Mr. W.L. Honnold, Asst. Director
RR #3, Box 214 Hopkins Rd.
Romeoville, IL 60441
(815) 838-6941

An In-Depth Case Study of Three CBE Institutions

Three institutions were selected for an in-depth case study of CBE. These were: DuPage Area Vocational Education Authority (DAVEA); Stephenson Area Career Center (SACC); and Vermilion Occupational-Technical Education Center (VOTEC). Each of these three was selected because each has some unique features regarding CBE.

DuPage Area Vocational Education Authority (DAVEA) Center

The DAVEA Center, which opened in 1974, was specifically built and designed for CBE individualized instruction. Before the center opened, extensive surveys and research were completed to identify the job competencies and the conditions and criteria for each. Over 202 active advisory committee members met regularly to review the data from the surveys, to verify competencies, and to make recommendations on the facility design, and finally on equipment purchases. The center was designed to provide skill training in a job-like setting. Students must perform at job entry standards for each goal they attempt.* An individually guided learning delivery system was in place when the center opened. The planners and the director of the center, Dr. John Gibson, felt that it was time to implement the ideas

*A goal is equivalent to a performance objective, while a goal title is equal to a task, competency or skill title.

educators had been expounding for the past 100 years. Some of these are:

1. Motivation is largely self sustaining.
2. Learning is a personal phenomenon.
3. Students learn best by doing.
4. Students learn readily from one another.
5. Students learn in different ways.
6. Learning takes place through the use of all the senses.
7. Students learn best when they can freely access more than one instructor.
8. Students aren't taught, but rather are helped to learn.
9. Every student can become employable at a clearly defined level in one or more identifiable job titles.
10. The learning climate should approximate industry as much as possible.

With this in mind, a center was created, equipped and staffed to serve the needs of all students. The initial programs were developed based upon the job market.

The center, designed for 3,400, now accommodates 1,500 high school students in day time programs as well as adults from the community, employees from industry, CETA and other clients. At night the center is used by the College of DuPage for evening programs in addition to DAVEA Extension Training (DET) Programs.

The curriculum at DAVEA is highly flexible and is designed to meet the needs of students, clients, employers, and employees. Anyone attending the school selects his or her career area and future job areas in which he or she wishes to be employed. Skills are identified for each job title, which means that each

student at DAVEA works on his or her own personalized curriculum. In addition to skill training on modern equipment, the center provides job seeking and job keeping skills such as writing a resume or filling out an employment application. The center operates on an open entry/open exit concept. Trainees or clients can enter the center to learn 10-15 skills and then exit the center for a job or for job advancement. The center provides training for job advancement, for underemployed workers and for unemployed workers.

All enrollees who successfully complete the skills necessary for job selection or advancement receive a skill certificate. (See Appendix E for a sample copy.)

Follow-up studies of graduates and their employers verify the center's effectiveness.

Stephenson Area Career Center (SACC)

Stephenson Area Career Center (SACC), Freeport, Illinois, began as a traditional vocational school in 1975. The programs were based upon job needs but all students completed the same curriculum via a traditional instructional approach. In 1977, a committee of teachers was formed to investigate competency based education. They visited various schools in several states to observe CBE techniques first hand. They formulated guidelines and strategies and recommended the school convert to a CBE format. A majority of the faculty voted to go CBE.

They selected District 916, Area Vocational Technical Institute of White Bear Lake, Minnesota, as their "model school" and type of learning delivery format. In return, District 916

furnished learning guides, audiovisuals, and consultants to assist SACC in setting up their CBE programs. The District 916's task lists were revised and verified by local advisory committees. The learning guides which could be used were adapted to meet SACC's clientele and references. New learning guides were written over a three year period; one for each task on the list. The original clientele at SACC were mostly high school juniors and seniors, but as the school moved to a CBE format, they began to open their doors to adults. Because of the CBE individualized format used at SACC, adults, apprentices, CETA and other clients were able to access the skill training to meet their needs on an open entry/open exit basis. SACC clientele includes underemployed, unemployed, pre-employed, CETA, apprentices, adults and industry employees or clients, and Highland Community College students.

The effectiveness of the center is attested to by student evaluations, student and adult follow-up studies, and acceptance by the Bureau of Apprenticeship Training to reduce the number of hours required because of their CBE system and certification of competence on each skill.

Vermilion Occupational-Technical Education Center (VOTEC)

VOTEC, which opened in 1975 with approximately 550 high school juniors and seniors, was established with an individually guided learning delivery system in mind such as is used at DAVEA. The public was told if they supported the creation of VOTEC it would serve their individual needs.

Surveys of the community were made and the data was reviewed by advisory committees. In addition, advisory committee members helped identify and verify the content for each vocational program. In addition, some programs now utilize a joint advisory committee with the community college.

When the center opened, several, but not all programs were individualized. In 1979, a CBE committee was established and a formal push was made to convert to personalized CBE with a unified school wide system. Workshops were conducted by Dr. Urban Oen of the CIVE Project and work days were devoted to developing CBE materials.

The school has a capacity for 703 trainees with 690 currently enrolled. VOTEC conducts adult training programs for: Danville Community College, CETA, adults and also industry. Some of these trainees are mixed with the high school day enrollment where space exists while others are trained at night and during the summer.

The effectiveness of the center is measured by:

A. Follow-up studies of graduates and employers.

B. Analysis of follow-up studies which indicates the programs are effective.

C. Dr. Jacob Stern of the University of Illinois completed a follow-up study with employers and concluded that students who completed two years at VOTEC were more proficient than other employees after one and one-half years on the job.

D. Employers in the Danville Area are now asking applicants to show them a list or certificate of competencies that they can perform. This is an outgrowth of VOTEC's Certification of Competencies Completed.

E. Danville Community College will accept all competencies completed at VOTEC if students continue their education beyond high school and in a similar program at the college. (Danville Community College does not accept health competencies.)

DEFINITION OF TERMS

AFFECTIVE DOMAIN: Learning which involves the emotions or feelings. Described by words such as interests, attitudes, appreciations, values motivation and enthusiasm.

ARTICULATION: The relationship of an instructional program to similar or related programs at another level, i.e., between high schools and community colleges.

CHECKLIST: Performance and/or product measures containing a key list of criteria used to evaluate the student's performance of the task. The checklist is a type of criterion referenced test that requires the student to actually do a task under the conditions and standards stated in the performance objective. The instructor uses the checklist to note student performance as acceptable or unacceptable.

COGNITIVE DOMAIN: Deals with the thought processes and is learning which involves recall, recognition, and a development of intellectual skills and abilities; the information a person "knows."

COMPETENCY (SKILL OR TASK): Having the knowledge, fitness or ability to perform a specific task or skill successfully to meet a specified standard.

COMPETENCY BASED EDUCATION: [competency based vocational education (CBVE), performance based education (PBE), criterion referenced instruction (CRI), compentency based instruction (CBI), mastery learning]: A systematic way of organizing instruction which insures that students who complete a vocational-technical program can successfully perform each competency, task or skill to an acceptable entry level industry standard. To qualify for CBE, the program must contain the following components: 1. competencies, tasks or skills are verified or validated by industry employees or an advisory committee; 2. performance objectives are written which contain industry standards of expectation for completion, and the conditions under which the competencies are to be performed; 3. criterion referenced evaluation measures are used based upon the standards stated in the performance objective; 4. the performance objectives and task listings are made available to students prior to instruction; 5. student performance is evaluated against the stated standards and not against group norms or other students. (See also Personalized CBE)

COMPETENCY PROFILE: A record-keeping form used to keep track of competencies completed by a student.

COMPETENCY STATEMENT: A statement which includes an action verb and a noun that describes a job task (i.e., bake a cake; replace brake shoes, etc.)

CRITERION: The performance standard or proficiency statement listed in the performance objective by which students will be evaluated.

CRITERION REFERENCED TEST (CRT): [Criterion referenced measure (CRM) criterion exam, final evaluation, criterion referenced evaluation, objective referenced test, or proficiency test]: An evaluation of student knowledge or performance of a task, competency or skill according to the conditions and standards stated in the performance objective rather than by comparing one student to another or to a group.

CURRICULUM: The sum total of skills, objectives, content and learning activities arranged in a learning sequence for a particular instructional area.

DICTIONARY OF OCCUPATIONAL TITLES (DOT): A document published by the Employment and Training Administration, U. S. Department of Labor, that contains descriptions of specific job titles, tasks and work requirements for each job title.

DOT CODE: A nine digit number used to identify a specific job within a given cluster and taken from the Dictionary of Occupational Titles.

DUTY: A group of related tasks performed by incumbent workers in an occupational area and which are related to each other by the nature of the work to be performed (i.e., Job-Duty-Task-Step).

ENABLING OBJECTIVE (EO): [Micro-performance Objective (MPO), Intermediate Objective (IO, Subordinate Objective (SO)]: Statements that describe student knowledges, skills and attitudes which must be learned first in bite-size fashion before students attempt the terminal performance objective.

ENTRY LEVEL SKILLS: Those competencies required of a beginning worker in an occupation for immediate productivity upon entering an occupation.

FEASIBILITY STUDY: A study conducted for the purpose of determining whether or not a certain program of instruction should be offered. Factors such as prerequisites, investment requirements, employment opportunities and the number of students to be trained are taken into consideration.

INDIVIDUALIZED INSTRUCTION: (Personalized instruction, individualized learning, individually prescribed instruction): Instruction which is learner centered rather than content centered. Students work alone or in small groups on learning activities, materials and projects designed to meet their interests, needs, abilities, and learning styles. The rate of learning and the skills to be learned are agreed upon by the student and teacher with each student having his or her own prescription.

INTERVIEW METHOD: A job analysis technique in which employees are interviewed to gather information about their jobs.

JOB: Composed of a group of duties and tasks performed regularly in one's trade, occupation, or profession (i.e., Job-Duty-Task-Step).

JOB ANALYSIS: (Occupational Analysis): Procedures designed to identify all the important tasks necessary for the performance of a job. The method used to gather information about a job may involve observations, interviews, and questionnaires or the validation of a list of tasks by an advisory committee.

JOB TITLE: The common name by which a position is identified by industry.

LEARNING ACTIVITIES: Learning experiences or learning steps with directions instructing the students What to do; (i.e., view a videotape, read a book, practice a skill, etc.), Why do it, and How to do it. All learning activities lead toward understanding and performance of a task or skill.

LEARNING ACTIVITY PACKAGE (LAP): [Learning module, learning package, learning packet, student learning guide]: A package of learning materials organized around a task and designed to help the student manage his or her learning. Each LAP usually consists of a task description, performance objective, enabling objectives, learning steps, activities, resources (print and A/V), self-evaluations, information sheets, job sheets resources (print and A/V), and product/performance checklists. The package may be self contained or it may be a guide referring the student to many different resources. It may also contain a pretest. Usually a part of the LAP, but not not contained with it, is the written criterion exam used to test the cognitive knowledge.

LEARNING RESOURCES: Materials or activities, separate from procedural directions, and resource persons from which or whom a student gains the skills, knowledges and attitudes necessary to perform job tasks. They may include print and audiovisual materials of all kinds, equipment used in the occupation, computers, simulators, instructors, internships, peers, small or large group sessions (lectures, discussions, etc.).

MASTERY: Attaining a specified level of competence or performance; meeting the specified minimum requirements or standards of a task or competency stated in a performance objective.

MEASUREMENT: A systematic, objective procedure for evaluating a student's performance or behavior.

NORM REFERENCED TEST: A test in which the student's score is compared to the scores of other students taking the test.

OBSERVATION METHOD: A job analysis method of collecting data in which employees are observed while performing their jobs.

OCCUPATIONAL CLUSTER: A group or listing of jobs within a particular area that shares common experiences, knowledges, and skill requirements, such as transportation occupations, construction occupations, business occupations, manufacturing occupation, etc.

OPEN ENTRY/OPEN EXIT: A scheduling approach that allows students to enter or leave a vocational technical program at any time.

OCCUPATIONAL INVENTORY: (Job inventory, task inventory): A survey instrument containing a listing of tasks performed in a particular occupational area grouped under duty titles.

PERFORMANCE OBJECTIVE: (Measurable objective, terminal performance objective, or criterion objective): A statement of what the learner must know or do to master a given task or skill. The statement is stated in measurable terms and consists of three parts: A. the conditions under which the task or skill will be performed and the tools or equipment which will be used; B. a description of the task or skill and C. the standard, proficiency statement or criteria which states how well and how fast the task or skill must be performed for mastery.

PERFORMANCE TEST: A type of observational objective test used to evaluate student performance of a particular task or skill.

PERSONALIZED CBE: A type of instruction that permits student self pacing and which is learner centered rather than content centered. The program content is matched to the student's interests and abilities. Each student works toward his or her own employability job title target and each takes as long as his or her particular learning style requires to complete the program. Personalized CBE programs usually operate on an open entry/open exit concept wherein a student, unemployed worker or underemployed worker may enter a program to learn a given number of skills and then exit the program.

PSYCHOMOTOR DOMAIN: Motor skill learning which involves manipulative or muscular movement activities.

SKILL: (Competency or task): A manipulative action performed while producing a finished product or performing a task.

STANDARD: (Criterion): That part of a performance objective or of a criterion referenced measure which describes how well or to what level of proficiency a task or skill must be performed.

STEP: Those procedures or activities performed in the completion of a task or skill. A very specific level in the hierarchy of a job (i.e., Job-Duty-Task-Step).

STUDENT LEARNING GUIDE: (See Learning Activity Package)

SYSTEMS APPROACH: A logical and systematic procedure for doing something.

STUDENT COMPETENCY SHEET: A guide which lists the duty, task, skill or competency and the performance objective along with suggested learning activities and resources for accomplishing the competency, task or skill.

STUDENT CONTRACT: A formal, written agreement between the instructor and student that specifies the skills or tasks to be completed during a specified period of time.

TASK: (Competency or skill): A complete measurable element of work performed by an individual in a short span of time in the completion of a job duty (i.e., Job-Duty-Task-Step). Performance of a task usually results in a product or some observable change. Examples: type a business letter; calculate net salary.

TASK ANALYSIS: (Task detailing): Listing of all the steps or what the worker does when performing each of the tasks.

TASK DETAILING: Listing the steps involved in performing a job task in terms of what is done.

TASK LIST: (Task listing transcript): A listing of the tasks performed by workers in a given occupation/job.

TERMINAL PERFORMANCE OBJECTIVE: (See Performance Objective).

UNIT OF INSTRUCTION: A set of instructional materials used for the planning and delivery of instruction. It usually includes performance objectives, suggested learning activities, information sheets, activity sheets, assignment sheets, visual aids, tests, and answer keys.

VOCATIONAL-TECHNICAL EDUCATION CONSORTIUM OF STATES (V-TECS): A group of states and agencies that banded together to develop catalogs of performance objectives and performance guides in vocational-technical education. V-TECS employs a uniform procedure for identifying tasks and in developing objectives based on a job analysis technique. Members develop catalogs and receive catalogs developed by other members. V-TECS is an operating unit of the Commission on Occupational Education Institutions, Southern Association of Colleges and Schools.

V-TECS CATALOG: A comprehensive collection of performance objectives, performance guides, and related data developed for a specific occupation.

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APPENDIX A-1

STUDENT COMPETENCY SHEET

DUTY or UNIT: Performing Off Hand Grinding

TASK NUMBER: 535

COMPETENCY (OR TASK): Grind a Lathe Turning Tool

PERFORMANCE OBJECTIVE: Given an H.S.S. square tool bit, pedestal grinder, and the necessary hand tools, grind a lathe turning tool. To master this task you must pass a written criterion exam with 16 out of 20 correct and score 16 out of 20 on a product checklist.

SUGGESTED LEARNING ACTIVITIES:

1. Read Information Sheet 535-001 "Lathe Tool Materials" to identify cutting tool materials.

2. Read Machine Tool Technology by Repp and McCarty, Pages 206-207 and Machinery's Handbook, 621.02 MAC Pages 1745-1750 located in the LRC.

3. Complete Activity Sheet 535-002 to check your understanding of cutting tool materials.

4. Read Information Sheet 535-003 "Lathe Tool Geometry" to identify geometric forms of lathe tools.

5. Read Machinery's Handbook 621.02 MAC, Pages 1794-1820 in the LRC to identify cutting tool forms.

6. Complete Activity Sheet 535-004 to check your understanding of tool bit materials and geometry.

7. Read Machine Tool Technology, Repp, McCarty Pages 213-218 to identify the procedures for grinding a lathe turning tool.

8. View videotape 535-005 "Grinding a Lathe Turning Tool" in the LRC.

9. Complete Activity Sheet 535-006 to check your understanding of grinding a lathe turning tool.

10. Practice grinding a lathe turning tool in the laboratory.

EVALUATION

11. When you feel you can grind a lathe turning tool without help, see your instructor for evaluation. (Refer to product checklist 535.)

EXTENDED LEARNING ACTIVITIES: None

APPENDIX A-2

DAVEA CATALOG OF LEARNING GOALS

_____DIVISION

PROGRAM:

SPECIALTY AREA:

_____

GOAL NO.

_____

STUDENT WILL:

_____

GIVEN:

_____

EVALUATION:

GOAL RESOURCE GUIDE

GOAL _____ GOAL TITLE _____

ACTIVITIES:

AUDIO-VISUAL _____

_____

_____

_____

READING _____

_____

_____

_____

WRITING _____

_____

_____

_____

OTHER (MANIPULATIVE/FUNCTIONAL) _____

_____

_____

_____

APPENDIX B

COMPETENCY—BASED INDIVIDUALIZED VOCATIONAL EDUCATIONAL CONSORTIUM

CIVEC
301 N. Swift Road
Addison, Illinois 60101
312/620-8770

Produced By
Kay Marshall
Wilco Area Career Center
Hopkins Road
Romeoville, Illinois 60441

A LEARNING GUIDE

Task CLEAN AND WASH FABRIC UPHOLSTERY

Purpose Soiled upholstered articles in a health care facility create a drab appearance and are also a source of spreading germs. You will be required to keep the upholstery appearing attractive and prevent a source of contamination.

HEALTH CARE HOUSEKEEPING AIDE

Program	Task	Est. Time	Prereq.
HO	030	6 hours	

6/81

LEARNING CONTRACT

1 STUDENT DATA

NAME _____ SOCIAL SECURITY NUMBER _____

LENGTH OF CONTRACT (NORMAL TIME IN HOURS) _____

2 TERMINAL PERFORMANCE OBJECTIVE

GIVEN CLEANING SUPPLIES, CLEAN AND WASH FABRIC UPHOLSTERY SO THERE ARE NO VISIBLE STAINS OR SPOTS AND THE FABRIC IS CLEAN AND HAS A UNIFORM COLOR. TO DEMONSTRATE MASTERY OF THIS TASK, YOU MUST SCORE 38 OUT OF 40 POINTS (95%) ON A PERFORMANCE CHECKLIST AND ANSWER 9 OUT OF 11 QUESTIONS (80%) CORRECTLY ON A WRITTEN CRITERION EXAM.

2a MICRO--PERFORMANCE OBJECTIVE(S)

1. Prepare fabric upholstery for shampooing.
2. Practice shampooing upholstery.
3. Clean and wash fabric upholstery.

3 AGREEMENT

I, _____ agree to complete the above stated terminal performance requirement within _____ to _____. I further recognize that the conditions of the contract (performance and time agreement) report my ability to perform the requirements of the occupation and record my progress.

_____
Student's Signature

DEPT	PROG	TASK	TPO
	HO	030	030

_____
Instructor's Signature
(verifies competency)

MICRO - PERFORMANCE OBJECTIVE #1

PREPARE FABRIC UPHOLSTERY FOR SHAMPOOING

LEARNING STEPS

1. Read Resource #1 to learn the preparation for shampooing fabric upholstery.
2. View Resource #2 **for** step-by-step procedure for preparing fabric upholstery for shampooing.
3. Practice preparing upholstery for shampooing using Resource #3.
4. Go to Resource #4.

RESOURCES

1. Text: "Being a Housekeeping Aide", Chapter 17, pages 7 and 8 in HO Room.
2. A.V. Program #030-001-002 "Preparing Upholstery for Shampooing" in HO Room.
3. Activity Sheet #030-001-003 "Upholstery Preparation for Shampooing" this packet.
4. MPO #2 this SLG.

DEPT.	PROG	TASK	TPO	MPO
	HO	030	030	001

ACTIVITY SHEET #030-001-003

Upholstery Preparation for Shampooing

See Instructor for practice site. Prepare furniture for shampooing. **Have another** student observe and evaluate your performance.

	YES	NO
1. Assembles equipment and supplies and takes to area.		
2. Vacuums entire article.		
3. Removes seats or cushions.		
4. Uses crevice tool to clean crevices and corners.		
5. Tests for remaining dust by slapping article.		
6. Prepares small amount of cleaner.		
7. Tests shampooing agent on small inconspicuous area.		
8. Returns equipment and supplies to **storage**.		
9. Washes hands.		

DEPT.	PROG	TASK	TPO	MPO
	HO	030	030	001

MICRO - PERFORMANCE OBJECTIVE #2

PRACTICE SHAMPOOING UPHOLSTERY

LEARNING STEPS

1. Read Resource #1 for procedure on shampooing upholstery.
2. See Resource #2 for demonstration on shampooing upholstered furniture.
3. Complete Resourse #3 to practice what you have learned.
4. Go to Resource #4.

RESOURCES

1. Text: "Being a Housekeeping Aide", Chapter 17, pages 8 and 9 in HO Room.
2. Instructor for scheduling.
3. Activity Sheet #030-002-003 "Shampooing Furniture" this packet.
4. MPO #3 this SLG.

DEPT.	PROG	TASK	TPO	MPO
	HO	030	030	002

ACTIVITY SHEET #030-002-003

Shampooing Furniture

Practice shampooing furniture in meeting room at school. See Instructor for scheduling. Have another student check your skill using checklist below as a guide.

	YES	NO
1. Checks test area for discoloration or damage.		
2. Moves article to workroom.		
3. Assembles equipment and supplies.		
4. Mixes shampooing solution in a bucket.		
5. Mixes plain rinse water in a bucket.		
6. Dips a soft brush in solution and cleans small section (about 1 square foot).		
7. Scrapes excess foam with spatula.		
8. Rinses section.		
9. Dries with clean cloth.		
10. Repeats washing, rinsing and drying, overlapping sections until entire article is finished.		
11. Allows to dry overnight.		
12. Brushes dry fabric with brush (or vacuums with furniture attachment).		
13. Replaces furniture to proper area.		
14. Returns equipment to storage.		

MICRO - PERFORMANCE OBJECTIVE #3

CLEAN AND WASH FABRIC UPHOLSTERY

LEARNING STEPS

1. Review Resource #1 to refresh memory on preparing and shampooing fabric upholstery.
2. When ready for written evaluation, refer to Resource #2.
3. Review Resource #3 for steps involved in this task.
4. When ready to perform for evaluation, see Resource #4.

RESOURCES

1. Text: "Being a Housekeeping Aide", Chapter 17, pages 7-9 in HO Room.
2. Written Criterion Exam Task #030 - Housekeeping File.
3. All Activity Sheets this guide.
4. Instructor - Performance Checklist Task #030 in Housekeeping File.

DEPT.	PROG	TASK	TPO	MPO
	HO	030	030	003

PROGRAM Health Care Housekeeping Aide

CRITERION EXAM

TASK # 030

DIRECTIONS:

THE PURPOSE OF THIS EXAM IS TO DETERMINE WHETHER OR NOT YOU HAVE UNDERSTOOD THE INFORMATION ON Cleaning and Washing Fabric Upholstery.

Each of the questions or incomplete statements below is followed by several words, phrases, or a series of numbers. Choose the one which best answers the question or completes the statement correctly. Place the letter associated with that choice (A, B, C or D) in the numbered blank space on your ANSWER SHEET. DO NOT WRITE ON THIS TEST! To master this exam you must answer 9 **out of** 11 **items correctly, (** 80 **%).**

1. Tiny particles of dirt penetrate beneath the surface of fabric upholstery because

   A. most people do not wash their hands often enough.
   B. fabrics are non-porous and do not absorb dust.
   C. fabrics are porous and absorb dust.
   D. many people use the furniture.

2. Regular wiping and vacuuming is effective because

   A. it lifts topmost layers of dirt.
   B. it provides deep cleaning.
   C. it keeps the surface clean and fresh.
   D. A and C are correct.

DEPT.	PROG	TASK	TPO	MPO
	HO	030	030	003

3. The reason you test the shampoo solution on a small inconspicuous area is

   A. to be sure it will not discolor the fabric.
   B. to be sure it will not damage the fabric.
   C. to be sure it will clean the fabric.
   D. all of the above.
   E. A and B are correct.

4. The cleaning solution should be water based if the furniture

   A. has a wool fabric.
   B. has a mohair fabric.
   C. has a foam rubber stuffing.
   D. has a feather stuffing.

5. What substances can be safely used on a foam rubber stuffing?

   A. Soap.
   B. Detergent.
   C. Cloudy ammonia.
   D. All of the above.

6. A sponge is used to spot clean small areas because

   A. the sponge soaks up dirt.
   B. the sponge soaks up water and the area dries faster.
   C. the sponge feathers the outside of the spot easily.
   D. the sponge allows enough water to penetrate.

7. How large an area should be scrubbed at one time?

   A. One square foot.
   B. Two square feet.
   C. Three square feet.
   D. Four square feet.

8. Excess lather should be removed with a

   A. dry cloth.
   B. dry sponge.
   C. spatula.
   D. brush.

9. When scrubbing fabric upholstery, you should use

   A. an up and down motion.
   B. a circular motion.
   C. a side to side motion.
   D. any of the above.

10. After rinsing with clear warm water, you should dry by

    A. using vacuum on high.
    B. using vacuum on low.
    C. wiping with damp sponge.
    D. wiping with dry cloth.

11. If colors are likely to run or fade, you should

    A. rub briskly with dry cloth.
    B. vacuum lightly.
    C. pat with damp sponge.
    D. pat with dry cloth.

PROGRAM: HEALTH CARE HOUSKEEPING FILE

TASK: Clean and Wash Fabric Upholstery

TASK # 030

PERFORMANCE/PRODUCT CHECKLIST

STUDENT'S NAME _____ **EVALUATION SITE** _____

EVALUATOR'S NAME _____ **PERFORMANCE ATTEMPT** 1 2 3 4

DATE OF ATTEMPT ____ ____ ____ ____

TERMINAL PERFORMANCE OBJECTIVE:

GIVEN CLEANING SUPPLIES, YOU WILL CLEAN AND WASH FABRIC UPHOLSTERY SO THERE ARE NO VISIBLE STAINS OR SPOTS AND THE FABRIC IS CLEAN AND HAS A UNIFORM COLOR. TO DEMONSTRATE MASTERY OF THIS TASK, YOU MUST SCORE 38 OUT OF 40 POINTS (95%) ON A PERFORMANCE CHECKLIST AND ANSWER 9 OUT OF 11 QUESTIONS (80%) CORRECTLY ON A WRITTEN CRITERION EXAM.

DIRECTIONS TO THE STUDENT:

BEFORE ATTEMPTING THIS TASK FOR MASTERY, CAREFULLY REVIEW THIS CHECKLIST. YOU WILL BE EVALUATED ON THE BASIS OF THIS CHECKLIST. WHEN YOU FEEL YOU ARE READY FOR EVALUATION CONTACT YOUR INSTRUCTOR. YOU MUST COMPLETE YOUR PERFORMANCE WITHIN N/A MINUTES AND MUST SCORE AT LEAST 38 OUT OF 40 POINTS OR 95 % FOR MASTERY. CRITICAL ITEMS ARE MARKED WITH AN ASTERISK (*). THESE ITEMS MUST BE SATISFACTORILY COMPLETED.

DIRECTIONS TO THE EVALUATOR:

THE STUDENT WILL CONTACT YOU WHEN READY FOR EVALUATION. THE STUDENT MUST COMPLETE THE PERFORMANCE WITHIN N/A MINUTES AND MUST SCORE 38 OUT OF 40 POINTS OR 95 % AND ALL ITEMS MARKED WITH AN ASTERISK (*) MUST BE SATISFACTORILY COMPLETED.

DEPT.	PROG	TASK	TPO	MPO
	HO	030	030	003

PERFORMANCE CHECKLIST #030

CRITICAL ITEMS	ITEMS TO BE OBSERVED OR CHECKED	RATING YES	RATING NO
*1.	Bring article to work room.	2	0
*2.	Assemble equipment and supplies.	2	0
*3.	Vacuums entire article.	2	0
*4.	Removes seats or cushions.	2	0
*5.	Uses crevice tool to clean crevices and corners.	2	0
6.	Tests for remaining dust by slapping article.	1	0
7.	Prepares small amount of cleaner.	1	0
*8.	Tests shampooing agent on small inconspicuous area.	2	0
*9.	Checks test area for discoloration or damage.	2	0
*10.	Assembles equipment and supplies.	2	0
*11.	Mixes shampooing solution in a bucket.	2	0
*12.	Mixes plain rinse water in a bucket.	2	0
*13.	Dips a soft brush in solution and cleans small section (about 1 square foot).	2	0
*14.	Scrapes excess foam with spatula.	2	0
*15.	Rinses section.	2	0
*16.	Dries with clean cloth.	2	0
*17.	Repeats washing, rinsing and drying, overlapping sections until entire article is finished.	2	0
*18.	Allows to dry overnight.	2	0
*19.	Brushes dry fabric with brush (or vacuums with furniture attachment).	2	0
*20.	Replaces furniture to proper area.	2	0
*21.	Returns equipment to storage.	2	0
	TOTAL POINTS EARNED =		

POINTS NEEDED FOR MASTERY = 38
TOTAL POINTS POSSIBLE = 40

DEPT.	PROG	TASK	TPO	MPO
	HO	030	030	003

APPENDIX C
PACKAGE EVALUATION FORM

Program _____ Task # _____ Date _____

Student Name (Optional) _____

DIRECTIONS: This is your chance as a student to help improve the **QUALITY** of your instruction. Since this learning package was **designed** to help you to instruct yourself, it must be written in a way that is easy for you to understand and follow. Please answer the following questions so that we can improve this package. Check either **"YES" or "NO" and** make **any comments you feel may be helpful. Return the** completed form to your instructor.

LEARNING GUIDE	YES	NO	COMMENTS
1. **Did you use the learning** guide to **complete this task?**			
2. **When you began** the package did you **know what** you were expected to do to **complete** it successfully?			
3. **Were the learning** steps easy to follow?			
4. **Were you able** to locate the resources easily?			
RESOURCES (written) 5. **Were** the written **resources** available **when you needed them?**			
6. **Were** the written resources easy to understand? (Please name any specific **resources you** had **difficulty** with.)			
7. **Were the activities and study questions helpful?**			
RESOURCES (A.V.) 8. **Did you** use the A.V. resources included in this package?			
9. **Were A.V.** resources available when **you needed** them?			
10. **Were A.V. resources easy to understand?** (Please name any specific **A.V.** resources you had difficulty with.)			
TESTS 11. **Did** you feel ready to take the written test after completing the package?			
12. Were the **test** questions clear? (Please name specific items you had difficulty with.)			
13. Did the test cover the material you studied?			
14. **Did you feel** ready to perform for **the performance?**			

APPENDIX D

GOAL LIST FOR MEDICAL LABORATORY ASSISTANT

AT 001-009 Joining the Health Care Team

* AT 001 Choose A Health Career
AT 002 Participate in HOSA/VICA
* AT 003 Identify the Departments in a Clinical Laboratory
* AT 004 Define the Role of the Clinical Laboratory Worker
* AT 005 Identify the Procedures in the Medical Lab Assistant Program Area
* AT 006 Identify Your Ethical & Legal Responsibilities

AT 100-199 Using Laboratory Equipment

* AT 100 Demonstrate Safety Equipment in the Laboratory
* AT 101 Demonstrate the Use of Metrics in the Laboratory
* AT 102 Demonstrate the Use of the Balance
* AT 104 Demonstrate the Use of the Centrifuge
* AT 105 Demonstrate the Use of the Spectrophotometer
* AT 106 Demonstrate the Use of the Laboratory Glassware
* AT 107 Clean Laboratory Glassware

* Asterisk goals are required

AT 200-299 Performing EKG's

AT 200 Define EKG Terms
AT 201 Identify the Parts of the Heart and How it Functions
AT 203 Identify and Describe EKG Equipment
AT 204 Describe and Place EKG "Leads"
AT 205 Perform an EKG
AT 206 Identify Artifacts
AT 207 Clean & Maintain EKG Equipment
AT 208 Mount and EKG

AT 300-399 Performing Bacteriology Procedures

AT 300 Define Bacteriology Terms
AT 301 Explain the Importance of Proper Specimen Collection and Handling
AT 302 Identify Bacteriology Equipment
AT 303 Identify Bacteriology Media
AT 304 Obtain a Throat Culture
AT 305 Obtain a Sterile "Clean Catch" Urine Sample
AT 306 Inoculate a Throat Culture
AT 307 Inoculate a Urine Culture
AT 308 Prepare a Smear

AT 309 Perform a Gram Stain
AT 310 Examine and Report Findings of a Gram Stain
AT 311 Identify Pathogenic and Non-Pathogenic Bacteria
AT 312 Maintain Control Cultures by Sub-Culturing
AT 320 Prepare Tube Media
AT 321 Prepare Blood Agar and Pour Plates
AT 322 Sterilize Using the Autoclave

AT 400-499 Performing Phlebotomy Procedures

AT 400 Define Phlebotomy Terms
AT 401 Identify Phlebotomy Equipment
AT 402 Identify Vacutainer Tubes and Common Abbreviations
AT 403 Prepare and Identify Patient
AT 404 Perform a Venipuncture Using a Vancutainer
AT 405 Perform a Venipuncture Using a Syringe
AT 406 Make a Differential Smear
AT 407 Prepare and Separate Blood Samples
AT 408 Perform a Finger Puncture
AT 409 Identify the Sources of Error in Phlebotomy

AT 500-599 Performing Urinalysis Procedures

AT 500 Identify the Parts of the Kidney and the Process of Urine Formation
AT 501 Define Urinalysis Terms
AT 502 Collect a Routine Urine Specimen
AT 503 Collect a "Clean Catch" Urine Sample
AT 504 Perform Physical Tests on Urine
AT 505 Perform Specific Gravity on Urine
AT 506 Perform Chemical Tests on Urine
AT 507 Perform a Urine Microscopic
AT 508 Report Findings of a Complete Urinalysis

AT 600-699 Performing Hematology Procedures

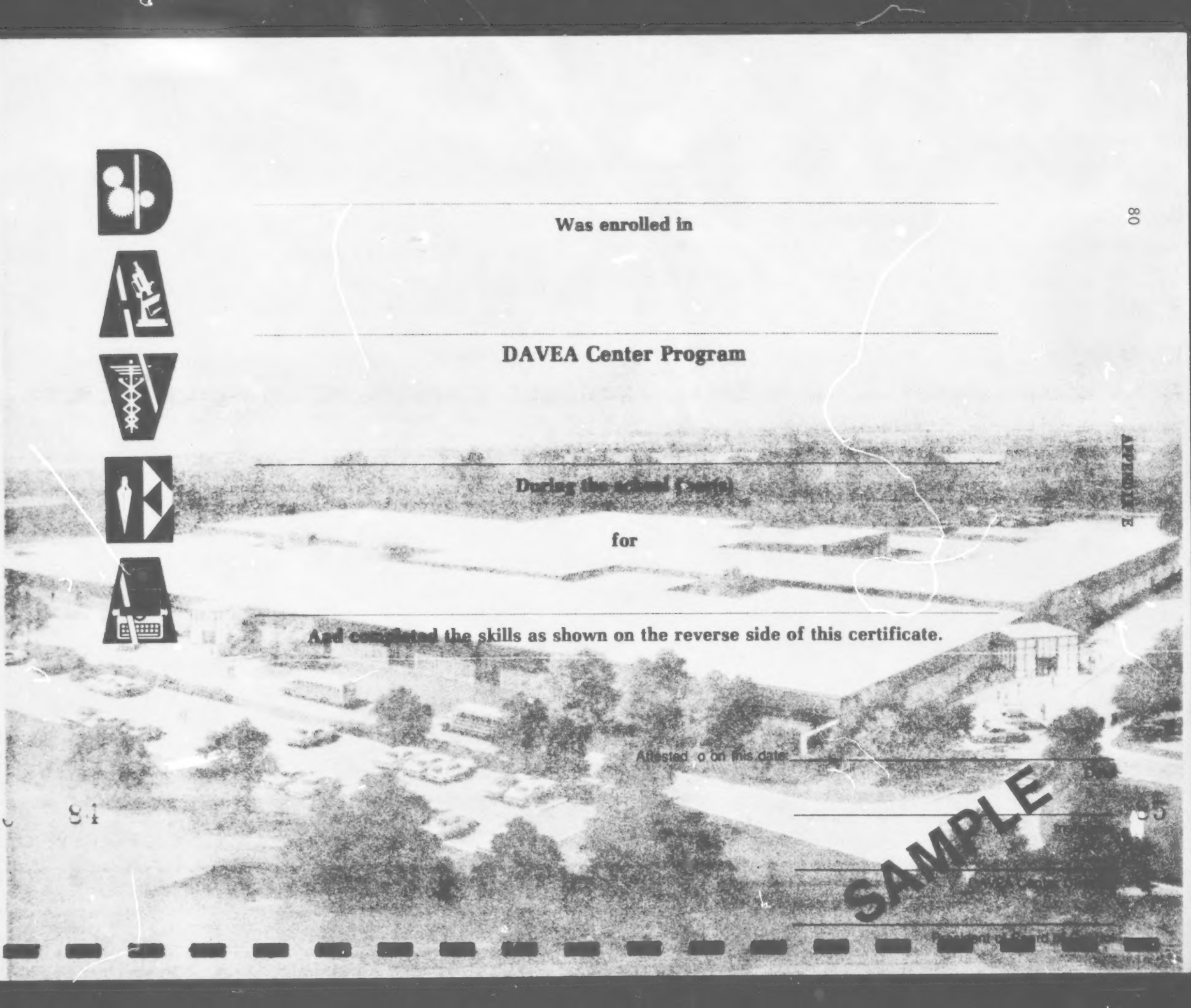
AT 600 Define Hematology Terms
AT 601 Describe the Maturation Sequence of Red Cells, White Cells, & Platelets
AT 602 Perform a Hemoglobin
AT 603 Perform a Hematerit
AT 604 Perform a WBC
AT 605 Perform an RBC
AT 606 Perform a Differential
AT 608 Perform a Sed Rate
AT 609 Perform a Reticulocyte Count
AT 610 Determine MCV, MCH, MCHC
AT 611 Describe the Semi-Automated Cell Counter and Explain How it Functions
AT 615 Report Findings of a Complete CBC

AT 700-799 Performing Chemistry Procedures

AT 700 Define Chemistry Terms
AT 701 Perform a Serum Glucose Test
AT 702 Perform a Serum Cholesterol Test
AT 703 Perform a SGOT or SGPT
AT 710 Prepare a Quality Control Chart

AT 800-899 Performing Serology and Blood Bank Procedures

AT 800 Define Serology Terms
AT 801 Perform a Mono-Spot Test
AT 802 Perform a UCG Pregnancy Test
AT 805 Perform a Group RH Test



Was enrolled in

DAVEA Center Program

During the school (year)

for

And completed the skills as shown on the reverse side of this certificate.

Attested to on this date

SAMPLE

_____ while attending the DAVEA Center has demonstrated the proficiencies as follows:

STUDENT'S NAME

SKILLS

SKILLS

81

97

APPENDIX F

DUPAGE AREA VOCATIONAL EDUCATION AUTHORITY

301 NORTH SWIFT ROAD
ADDISON, ILLINOIS 60101
Dr John Gibson, Director
312/620-8770

July 14, 1982

Dear AVC Directors and Deans of Vocational-Technical Education:

The CIVE project supported by the Illinois Department of Commerce and Community Affairs is conducting a study to identify all secondary and post-secondary educational institutions in Illinois which currently operate competency based vocational education programs (CBE). In addition, we are interested in obtaining the name of the contact person at each institution, title and telephone number and procedures to be followed by employment skills training operators who wish to enroll clients in your CBE programs who are unemployed or underemployed and 17 years of age or older.

The data from the survey will be tabulated in a matrix chart showing which institutions offer CBE programs, the programs offered, who to contact, procedures, etc. This data will be included in a document which describes the development, administration, and evaluation of CBE programs in Illinois. Since employment skills training operators in all communities in Illinois will be using the manual, it is imperative that we receive a 100% response on the attached survey. As you can imagine, the impact of such a document should be tremendous in terms of increased enrollment for your institution.

Please complete and return the survey in the enclosed self-addressed stamped envelope by July 31, 1982. Thank you. Responses to the survey will be mailed to you in early September.

Sincerely,

Urban T. Oen

Urban T. Oen, Ph.D.
Project Director
Demonstration Center CIVE Project
(Competency Based Individualized Voc. Ed.)

A Vocational High School, Offering Employment Training in Business, Industry, Transportation, Media, Applied Science, and Personal & Public Service Careers

ILLINOIS COMPETENCY BASED EDUCATION SURVEY

Return To:
Urban Oen
DAVEA Center
301 N. Swift Rd.
Addison, IL 60101

Return By:
July 31, 1982

A. Background

1. Name of Respondent _____
   Title _____
   School _____
   School Address _____
   _____

B. Description of Competency Based Education at your institution.
NOTE: My definition of competency based education is a system whereby tasks of workers are identified and validated via a current advisory committee, performance objectives are written and given to students prior to instruction, criterion referenced measures are developed which relate to the objectives, the programs are open entry/open exit and students master a given skill before progressing to the next skill.

1. Do you offer any CBE programs at your school?

   ____ yes ____ no

   a. If yes, continue survey
   b. If no, please turn to question I on page 4. Complete and then enclose in envelope and return to us. Thank you.

2. What is the approach "officially" called at your school, ie. CBE, CBVE, PBE, PSI etc? _____

3. Can individuals complete a partial list of tasks and exit or must they complete the entire program in order to receive a certificate?

   a. Partial _____
   b. Entire Program _____
   Comments:

4. Is upgrading and retraining of workers already employed offered routinely within most of your vocational-technical programs?

   ____ yes ____ no

   Comments:

5. Can unemployed workers be placed within your programs?

   ____ yes ____ no

Comments:

6. Please answer the following questions regarding student enrollment.

   a. When can <u>new</u> students <u>routinely enroll</u> in your CBE training programs? Ex: (First Monday of week, first Monday of month, etc.) _____
   _____

   b. When can students routinely exit your programs? (Can they exit early if they have mastered all the skills?)
   _____
   _____

   c. Can students enroll in your current on-going programs to learn 10 skills and then exit?

   ____ yes ____ no

   1) If yes, can they do this for:

      a) Day-time programs? ____yes ____no
      b) Evening programs?____ yes ____ no
      c) Others: ____ yes ____ no
         Please list _____
         _____
      d) Comments:

7. Generally, what <u>months</u> of the year can students attend your CBE training programs?

   Full-time From _____ to _____
   Part-time From _____ to _____

8. Can students be routinely placed into your programs on an <u>advanced standing</u> basis if they can document prior mastery of program ski'ls?

   ____ yes ____ no

   Comments:

C. How **are desired** student outcomes handled?

1. What are the desired student outcomes of each program officially called at your school?

   a. Tasks _____
   b. Competencies _____
   c. Other (**please** list) _____

2. Are the student outcomes listed on paper?

____ yes ____ no

(If yes, please enclose sample copy)

3. How were the outcomes identified for the CBE programs?

a. Did a consultant identify the skills? ____ yes ____ no
b. Was a survey of actual workers completed? ____ yes ____ no
c. Were the skills identified by the instructor? ____ yes ____ no
d. Were the skills validated by an advisory committee? ____ yes ____ no

Comments:

4. Are skill certificates provided to all enrollees upon successful completion of all or a partial list of tasks?

____ yes ____ no

(If yes, please enclose a sample)

D. How is instruction provided?

1. Are student learning guides or packages developed for each task or skill?

____ yes ____ no

a. If yes, what are they called? _____
b. If yes, please enclose a sample. _____
c. If no, do you use competency sheets or other forms. ____ yes ____ no
d. If yes to c, what do you call them and please enclose sample. _____

2. How is most instruction delivered in your CBE program?

a. Individualized _____
b. Group _____
c. Combination a + b _____
d. Other (please list) _____

3. Does your CBE program use learning resource centers where students go to read, see films, etc.

____ yes ____ no

a. If yes, are they:

1) Centrally located throughout the school? _____
2) Housed within the CBE program area? _____
3) Other (please list) _____

4. How are the CBE competencies measured? (Check all which apply)

   a. Paper and pencil tests _____
   b. Product/Performance checklists _____
   c. Other (please list) _____

E. Which programs at your institution are delivered via a CBE format? (Please list or enclose a course/program listing with CBE programs checked). (✓)

F. Who should be contacted at your institution to enroll in one of the CBE programs?

   1. Name _____
   2. Title _____
   3. Address _____
      _____
   4. Telephone # _____

G. What procedures should employment skill training operators follow to enroll unemployed, underemployed, etc. students in your CBE programs? (Enclose registration procedures if you wish. Please be brief.)

H. What other comments do you have regarding CBE programs at your institution which we have not addressed?

I. Are you aware of any other educational institutions within your geographical boundaries which offers CBE programs? If yes, may we have the names, addresses and telephone number of each institution?

Thank you for your valuable assistance. Please enclose the survey in the self-addressed stamped envelope and return it to us.

APPENDIX G

1982

PUBLIC AREA SECONDARY VOCATIONAL CENTERS IN ILLINOIS

AMBRAW VALLEY AVC
Mr. Robert Craft, Director
Eighth & Charles Street
Lawrenceville, Illinois 62439
PH: (618) 943-3612

BECK AVC
Mr. Ronald K. Stephenson, Director
RR 3, Box 91
Red Bud, Illinois 62278
PH: (618) 473-2222

BLOOMINGTON AVC
Mr. Dan Swanson, Director
1202 East Locust Street
Bloomington, Illinois 61701
PH: (309) 827-6124

CAPITAL AVC
Mr. D. Kent Siders, Director
2201 Toronto Road
Springfield, Illinois 62708
PH: (217) 529-5431

COLLINSVILLE AVC
Mr. Alfred L. Pirtle, Director
2201 South Morrison Street
Collinsville, Illinois 62234
PH: (618) 345-5350

DAVEA
Dr. John Gibson, Director
301 North Swift Road
Addison, Illinois 60101
PH: (312) 620-8770

DECATUR AVC
Mr. Jim Oettel, Director
300 East Eldorado Street
Decatur, Illinois 62523
PH: (217) 424-3070

GALESBURG AVC
Mr. Bill Creekmur, Director
1135 West Freemont Street
Galesburg, Illinois 61401
PH: (309) 343-9830

GRUNDY AVC
Mr. Donald Kaufman, Director
1000 Union Street
Morris, Illinois 60450
PH: (815) 942-4390

INDIAN VALLEY AVC
Mr. Richard W. Yandell, Director
600 Lions Road
Sandwich, Illinois 60548
PH: (815) 786-3761

IROQUOIS ACC
Mr. Ralph Buswell, Director
Court House Road
Watseka, Illinois 60970
PH: (815) 432-5471

J. B. JOHNSON CAREER DEVELOP, CENTER
Mr. Michael Beaber, Director
4200 Humbert Road
Alton, Illinois 62002
PH: (618) 463-2153

JO DAVIESS-CARROLL AVC
Mr. Larry Zikmund, Director
Highway 20 West, P. O. Box K
Elizabeth, Illinois 61028
PH: (815) 858-2203

KANKAKEE AVC
Mr. Henry Hodus, Director
RR 2
Bourbonnais, Illinois 60914
PH: (815) 939-4971

LAKE COUNTY AVC
Mr. Mervyn D. Pilotte, Director
19525 West Washington
Grayslake, Illinois 60030
PH: (312) 223-6681

LASALLE-PERU AVC
Mr. Richard Graff, Director
Sixth and Creve Coeur
LaSalle, Illinois 61301
PH: (815) 223-2454

LINCOLNLAND AVC
Mr. Robert Dorch, Director
1000 Primm Road
Lincoln, Illinois 62656
PH: (217) 732-4131

LITTLE WABASH AVC
Mr. Jim Taylor, Director
RR 2
Carmi, Illinois 62821
PH: (618) 382-4689

LIVINGSTON AVC
Mr. Daren Cox, Director
1100 Indiana Avenue
Pontiac, Illinois 61764
PH: (815) 844-6113

MID-VALLEY AVC
Mr. Harvey L. Bos, Director
Keslinger and Meredith Roads
Maple Park, Illinois 60151
PH: (312) 365-6468

APPENDIX G

Public Community Area Vocational Centers In Illinois

MT. VERNON AVC
Mr. E. C. Gieselman, Director
Seventh and Casey Avenue
Mt. Vernon, Illinois 62864
PH: (618) 244-3700

OKAW AVC
Mr. Russell E. Hewitt, Director
North Eighth Street
Vandalia, Illinois 62471
PH: (618) 283-1395

PEKIN AVC
Mr. Bill Rees, Director
Court Street & Stadium Drive
Pekin, Illinois 61554
PH: (309) 347-4101

QUINCY AVC
Mr. Bill Fessler, Director
219 Baldwin Drive
Quincy, Illinois 62301
PH: (217) 224-3770

ROCKFORD AVC
Mr. Everett Worrell, Director
5125-35th Street
Rockford, Illinois 61109
PH: (815) 874-6321

SAUK ACC
Dr. Ron Foreman, Director
138th and Crawford Avenue
P. O. Robbins, Illinois 60472
PH: (312) 371-1880

STEPHENSON ACC
Mr. Roy Monzo, Director
Pearl City Road
Freeport, Illinois 61032
PH: (815) 235-8025 or 26

UNITED TOWNSHIP AVC
Mr. Mike Hanlin, Director
Archer Drive and 42nd Avenue
East Moline, Illinois 61244
PH: (309) 755-2171

VOTEC
Mr. Paul Wasser
Catlin Road
Danville, Illinois 61832
PH: (217) 443-0770

WEST CENTRAL ILLINOIS AVC
Mr. John P. Sappington, Director
South Johnson Road
Macomb, Illinois 61455
PH: (309) 837-2331

WILCO ACC
Dr. Roger Claar, Director
RR 3, Box 214
Romeoville, Illinois 60441
PH: (815) 838-6941

WHITESIDE AVC
Mr. Robert S. Gomsrud, Director
1608 Fourth Avenue
Sterling, Illinois 61081
PH: (815) 626-5810

APPENDIX H

1982

PUBLIC COMMUNITY COLLEGES IN ILLINOIS

BELLEVILLE AREA COLLEGE
2500 Carlyle Road
Belleville, Illinois 62221

BLACK HAWK COLLEGE
6600-34th Avenue
Moline, Illinois 61265

BLACK HAWK COLLEGE EAST
Routes 34 and 78
Kewanee, Illinois 61443

CARL SANDBURG COLLEGE
2232 S. Lake Storey Road
Galesburg, Illinois 61401

CITY COLLEGES OF CHICAGO
180 North Michigan Avenue
Chicago, Illinois 60601

CITY WIDE COLLEGE
185 North Wabash Avenue
Chicago, Illinois 60601

COLLEGE OF LAKE COUNTY
19351 W. Washington Street
Grayslake, Illinois 60030

DANVILLE AREA COMMUNITY COLLEGE
2000 East Main Street
Danville, Illinois 61832

ELGIN COMMUNITY COLLEGE
1700 Spartan Drive
Elgin, Illinois 60120

FRONTIER COMMUNITY COLLEGE
RR 1
Fairfield, Illinois 62837

HARRY S. TRUMAN COLLEGE
1145 West Wilson Avenue
Chicago, Illinois 60640

HIGHLAND COMMUNITY COLLEGE
Pearl City Road
Freeport, Illinois 61032

ILLINOIS CENTRAL COLLEGE
Route 24
East Peoria, Illinois 61635

ILLINOIS EASTERN COMMUNITY COLLEGE
233 East Chestnut Street
Olney, Illinois 62450

ILLINOIS VALLEY COMMUNITY COLLEGE
RR 1
Oglesby, Illinois 61348

JOHN A. LOGAN COLLEGE
Route 2
Carterville, Illinois 62918

JOHN WOOD COMMUNITY COLLEGE
1919 North 18th Street
Quincy, Illinois 62301

JOLIET JUNIOR COLLEGE
1216 Houbolt Avenue
Joliet, Illinois 60436

KANKAKEE COMMUNITY COLLEGE
Box 888
Kankakee, Illinois 60901

KASKASKIA COLLEGE
Shattuc Road
Centralia, Illinois 62801

KENNEDY-KING COLLEGE
6800 South Wentworth Avenue
Chicago, Illinois 60621

KISHWAUKEE COLLEGE
Highway 38 & Malta Roads
Malta, Illinois 60150

LAKE LAND COLLEGE
South Route 45
Mattoon, Illinois 61938

LEWIS & CLARK COMMUNITY COLLEGE
5800 Godfrey Road
Godfrey, Illinois 62035

LINCOLN LAND COMMUNITY COLLEGE
Shepherd Road
Springfield, Illinois 62708

LINCOLN TRAIL COLLEGE
RR 3
Robinson, Illinois 62454

APPENDIX H
Public Community Colleges in Illinois
Page 2

LOOP COLLEGE
64 East Lake Street
Chicago, Illinois 60601

MALCOLM X COLLEGE
1900 West Van Buren
Chicago, Illinois 60612

McHENRY COUNTY COLLEGE
Route 14 & Lucas Road
Crystal Lake, Illinois 60014

MORAINE VALLEY COMMUNITY COLLEGE
10900 South 88th Avenue
Palos Hills, Illinois 60465

MORTON COLLEGE
3801 South Central Avenue
Cicero, Illinois 60650

OAKTON COMMUNITY COLLEGE
1600 East Golf Road
Des Plaines, Illinois 60016

OLIVE-HARVEY COLLEGE
10001 South Woodlawn Avenue
Chicago, Illinois 60628

OLNEY CENTRAL COLLEGE
305 North West Street
Olney, Illinois 62450

PARKLAND COLLEGE
2400 West Bradley Street
Champaign, Ilinois 61820

PRAIRIE STATE COLLEGE
197th & Halsted Streets
Chicago Heights, Illinois 60411

REND LAKE COLLEGE
RR 1
Ina, Illinois 62846

RICHARD J. DALEY COLLEGE
7500 South Pulaski Road
Chicago, Illinois 60652

RICHLAND COMMUNITY COLLEGE
2425 Federal Drive
Decatur, Illinois 62526

ROCK VALLEY COLLEGE
3301 North Mulford Road
Rockford, Illinois 61101

SAUK VALLEY COLLEGE
RR 1
Dixon, Illinois 61021

SHAWNEE COLLEGE
Shawnee College Road
Ullin, Illinois 62992

SOUTHEASTERN ILLINOIS COLLEGE
RR 4 College Drive
Harrisburg, Illinois 62946

SPOON RIVER COLLEGE
RR 1
Canton, Illinois 61520

STATE COMMUNITY COLLEGE
417 Missouri Avenue
East St. Louis, Illinois 62201

THORNTON COMMUNITY COLLEGE
15800 South State Street
South Holland, Illinois 60473

TRITON COLLEGE
2000 Fifth Avenue
River Grove, Illinois 60171

URBAN SKILLS INSTITUTE
3901 South State Street
Chicago, Illinois 60609

WABASH VALLEY COLLEGE
2200 College Drive
Mt. Carmel, Illinois 62863

WAUBONSEE COMMUNITY COLLEGE
Route 47 at Harter Road
Sugar Grove, Illinois 60554

WILBUR WRIGHT COLLEGE
3400 North Austin Avenue
Chicago, Illinois 60634

WILLIAM RAINEY HARPER COLLEGE
Algonquin & Roselle Roads
Palatine, Illinois 60067

APPENDIX I

DEMONSTRATION CENTER CIVE PROJECT

(Competency Based Individualized Vocational Education)

The Demonstration Center CIVE Project funded by the Department of Adult Vocational and Technical Education, Illinois State Board of Education, has as its primary purpose the providing of opportunities for educators and others invloved in the training of unemployed and underemployed youth and adults for viewing and studying first-hand competency based education at work. Other purposes of the project are to:

1. provide free training to teachers, administrators and employment skill training operators in the development of CBE learning delivery materials and in the management of CBE programs. This includes some of the following:
   A. Conducting a job and task analysis
   b. Development of task lists
   C. Writing measurable performance objectives
   D. Developing product/performance checklists
   E. Development of student learning guides or competency guides
   F. Implementing and managing a CBE system
2. provide validated task lists to skill training operators and educators.
3. provide CBE teaching/learning materials to skill training operators and educators.
4. provide student learning guides and competency guides to skill training operators and educators.

5. provide mini-grants to schools to promote the development of student learning guides for skill training.
6. provide consultative help to educators and skill training operators on all facets of CBE.

Scope of the Project

The project is statewide in scope with workshops conducted for high schools, area vocational centers, community colleges, senior colleges, and employment skill training operators such as CETA, Department of Corrections, etc.

CIVE Consortium (CIVEC)

A unique feature of the project is the CIVE consortium which is composed of 25 schools of all educational levels who have banded together in the development of competency based learning materials. Materials developed by these schools are reproduced by the project and shared with everyone in the state.

Model Schools for Viewing CBE in Action

At the present time there are three model schools for viewing CBE in action. These are: The DuPage Area Vocational Education Authority (DAVEA Center), Addison, Illinois; Stephenson Area Career Center (SACC), Freeport, Illinois; and the Vermilion Occupational Technical Education Center (VOTEC), Danville, Illinois. Each of these schools offer a uniquely different opportunity to view CBE in action. The DAVEA Center is very large, offers a wide range of programs, and uses a competency

guide rather than learning guides to deliver instruction. The SACC Center is small, whereas VOTEC is much larger; both use student learning guides for the delivery of instruction. SACC and DAVEA are 100% CBE, whereas VOTEC is in the developmental stages.

Who to Contact for Assistance

Dr. Urban Oen is the Project Director and the person to contact in Illinois for CBE assistance. He can provide you not only with materials but with workshops and information on all educational skill training institutions in Illinois. For information contact him at: 301 North Swift Road, Addison, Illinois 60101. Telephone (312) 620-8770, extension 239 or 249.

ERIC Clearinghouse for Junior Colleges
8118 Math-Sciences Building
University of California
Los Angeles, California 90024

99 APR 15 1983